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CORRECTIVE MEASURES STUDY (CMS)
TRIBUTARY (AOC 8)

OCCIDENTAL CHEMICAL CORPORATION
DELAWARE CITY, DELAWARE

Prepared By:
GLENN SPRINGS HOLDINGS INC.

Conestoga-Rovers & Associates

410 Eagleview Blvd., Suite 110
Exton, PA 19341
Office: (610) 321-1800
Fax: (610) 321-2763

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4.26 TRIBUTARY (AOC 8)

4.26.1 OVERVIEW

Description

AOC 8 (the Tributary) is located within the northern portion of the Site, north of the Plant Process Area and the Kuehne property, and north of WL-1. Figure 4.26.1 presents a location map with the current topography and boundaries of the area. Figure 4.26.2 presents a 2007 aerial photo of AOC 8. *Photographs of the area will be provided in future versions of the CMS Report.* The Tributary is oriented east-west and is approximately 1,500 feet long and is as narrow as 10 feet and as wide as approximately 250 feet. AOC 8 covers an area of approximately four acres. The total depth of water ranges from a few inches to two feet. The Tributary is surrounded by a marsh area dominated with a dense growth of common reed (*Phragmites*).

History

AOC 8 is not a SWMU; therefore, it was never active and no operations were completed within AOC 8. The impact to AOC 8 is the result of discharge (overland flow and groundwater) from upgradient sources. No IMs were proposed at AOC 8.

The presence of the Tributary, its configuration, size, and ecological habitat are linked to the existence and operational history of the tide gate at the mouth of Red Lion Creek. The tide gate controls the water level in Red Lion Creek, and surrounding low-lying area (the marsh area). The historical aerial photographs, Figures 4.26.3 through 4.26.7, depict the changing conditions in this area.

According to historical records, a tide gate and dike were installed at the mouth of Red Lion Creek in 1937. The tide gate allowed creek water to discharge to the Delaware River at low tide, but prevented the river from flowing up the creek during high tide. From 1937 to 1985, the tide gate was set to maintain the marsh area in a flooded condition. In 1985, the tide gate or dike was washed-out, and the tidal connection between the Delaware River and Red Lion Creek was reestablished. During this time, Red Lion Creek reverted to its natural condition as a tidal estuary, and would have been flooded for part of the day and dewatered for part of the day. Repairs made to the tide gate in 1987 resulted in a lowering of the water level in Red Lion Creek. Since that time, the area of marsh has expanded dramatically with concomitant reductions in open-water. Currently, the open water is largely limited to the main channel of Red Lion Creek and the Tributary.

The following presents a broad summary of the sampling events completed at the Tributary. Details regarding these sampling events are discussed in the *Tributary Investigations 2006-March 2008: Report of Results*, *dated July 2008*. In addition, this report discusses the methodology and results for these sampling efforts completed from 2006 through March 2008.

The following lists a summary of the sampling programs conducted to investigate AOC 8.

- RLC Subsurface Investigation (1986)
- Phase II RFI Investigation (1998-1999)
- Ecological Risk Assessment (ERA) Sampling (2004)
  - Phase I Sampling Effort (August 2004 - September 2004)
  - Phase II Sampling Effort (November 2004 - December 2004)
- Additional Characterization Sampling (2006 to 2008)

Based on these investigations, it was determined that there is potential ecological risk to fish, piscivores, and benthic organisms in the Tributary itself. However, exposure pathways in the surrounding marsh were considered functionally incomplete because no species readily consume Phragmites. The 2006 through 2008 data, revealed that elevated mercury (above 10 mg/kg Cleanup Goal) is limited to the top six to seven inches of sediment, which was deposited during the operational life of the Plant (based on cesium and lead dating).

A detailed discussion of the relevant data to this CMS is included in Section 4.26.3. Relevant Data, below.

Current Status

As noted above, AOC 8 was never an active SWMU. No IMs have been completed at the Tributary. The Tributary is sampled quarterly as part of the Performance Monitoring Program (PMP).

4.26.2 SUMMARY OF AOC DOCUMENTATION

Table 4.26.1 presents a list of the documents that were reviewed and considered in the assessment of AOC 8.

4.26.3 RELEVANT DATA

This section presents a summary of the data considered by the CMS for AOC 8. Table 4.26.2 lists the relevant sample locations for AOC 8. Figure 4.26.1 presents the AOC 8 sample locations. The relevant data consists of sediment and surface water collected from 2004 to March 2008. The relevant data does not include fish tissue, benthos or macroinvertebrate data, as these are discussed in detail in the Ecological Risk Assessment (ERA) Report.

4.26.3.1 SOIL

There is no soil in AOC 8.

4.26.3.2 WASTE

There are no wastes in AOC 8.

4.26.3.3 GROUNDWATER

There is no groundwater in AOC 8.

4.26.3.4 SEDIMENT

Sediment samples considered relevant for the evaluation of AOC 8 were collected in 2004 and 2006. The relevant sediment data set was limited to the 0 to 0.5-foot depth interval, because this is the exposure point for ecological receptors. Impacts to biota are generally considered to be limited to exposure to chemicals in the top six inches of sediment or less. There is no exposure pathway for sediments deeper than six inches.

In December 2004, eight (8) surficial (0-0.5 feet) sediment samples (STATION-G through STATION-N) were collected from AOC 8 (see Figure 4.26.1). The sediment samples were collected during the Phase II ERA sampling in conjunction with coincident surface water sampling and other media sampling as part of an ecological evaluation. The sediments were analyzed for Target Analyte List (TAL) metals, VOCs, semi-volatile organic compounds (SVOCs), methyl mercury, and TOC.

In May and June 2006, sediment core samples were collected from nine locations, CHEM-1 through CHEM-9, in the Tributary (see Figure 4.26.1). The surficial sediment

samples (top inch) collected from these locations are considered relevant data for AOC 8. All samples were analyzed for total mercury by EPA method 7471. Samples collected at locations CHEM-3 through CHEM-9 were also analyzed for chlorinated benzenes (CBs) by EPA Method 8260. These locations corresponded to areas where CBs were elevated based on the November 2004 sample results.

In June 2006, three fine resolution sediment cores (CORE-1 through CORE-3) were collected in the Tributary to estimate sediment deposition rates and refine the vertical extent of mercury in sediments (see Figure 4.26.1.) The surficial sediment samples (every inch for the top 6-inches) collected from these locations are considered relevant data for AOC 8.

4.26.3.5 SURFACE WATER

All surface water samples collected from AOC 8 are considered relevant. In 2004, eight surface water samples (STATION-G through STATION-N) were collected from AOC 8 (see Figure 4.26.1). Samples were analyzed for TAL metals (total and dissolved), VOCs, SVOCs, methyl mercury, total suspended solids (TSS), TOC and DOC. Beginning in 2007, these same locations were included in the Quarterly PMP sampling program. Samples collected quarterly in 2008 were analyzed for TCL VOCs and total and dissolved mercury. The February 2008, first quarter 2008 sampling event, samples were also analyzed for dissolved TAL metals. In March 2008, eight additional surface water samples were collected at locations (STATION-S through STATION-Z) in addition to the eight routine surface water locations.

4.26.4 RISK SCREENING

The purpose of the screening is to identify Chemicals of Concern (COCs) for AOC 8. The relevant AOC 8 sediment and surface water data were compared to EPA Region III Ecological Screening Values (ESVs) established for the project.

This section provides a summary of the screening results. A detailed discussion of the screening process and results is presented in the ERA Report. Chemical concentrations in sediments and surface water were screened against conservative ESVs supplied by EPA Region III. Chemicals whose maximum concentrations were below ESVs were eliminated as COCs. Screening results are summarized below, and complete screening result tables are provided in Appendix A. The EPA Screening Criteria are described in Section 1._ and Table 1._.

Sediment Screening (ESVs)

The following table provides a summary of the COCs based on screening of the sediment data.

Sediment Screening	*Units*	*ESVs*	*Number of Samples*	*Number of Detects Above Criteria*	*Maximum Detected*	*Max Detected Location*
Parameters						
Volatile Organic Compounds						
1,2-Dichlorobenzene	ug/kg	330	16	3	83000	STATION-L
1,3-Dichlorobenzene	ug/kg	1700	16	2	26000 D	CHEM 4
1,4-Dichlorobenzene	ug/kg	340	16	8	320000 D	CHEM 4
Acetone	ug/kg	8.7	9	9	130 J	STATION-G
Benzene	ug/kg	160	9	1	7600	STATION-L
Carbon disulfide	ug/kg	0.85	9	9	31	STATION-N
Chlorobenzene	ug/kg	410	16	8	160000	STATION-L
Semi-volatile Organic Compounds						
2-Methylnaphthalene	ug/kg	70	9	3	1000 J	STATION-M
bis(2-Ethylhexyl)phthalate	ug/kg	182	9	7	700 J	STATION-K
Naphthalene	ug/kg	176	9	5	1000 J	STATION-G
Pyrene	ug/kg	195	9	1	600 J	STATION-M
Metals						
Arsenic	mg/kg	8.2	9	9	31.6	STATION-G
Cadmium	mg/kg	1.2	9	7	5	STATION-K
Chromium Total	mg/kg	26	9	9	253 J	STATION-G
Cobalt	mg/kg	50	9	3	58.1 J	STATION-K
Copper	mg/kg	34	9	4	43.2	STATION-N
Iron	mg/kg	20000	9	6	32500 J	STATION-N
Lead	mg/kg	46.7	9	2	95.1 J	STATION-H
Manganese	mg/kg	460	9	8	2590 J	STATION-L
Mercury~E1631	mg/kg	0.15	9	9	1382.53	STATION-G
Mercury~SW7471	mg/kg	0.15	36	35	1920 B	CHEM 1
Nickel	mg/kg	20.9	9	8	51.0 J	STATION-M
Selenium	mg/kg	1	9	8	4.3 L	STATION-I
Silver	mg/kg	1	9	1	1.4	STATION-G
Vanadium	mg/kg	57	9	2	109	STATION-I
Zinc	mg/kg	150	9	8	517 J	STATION-M

Surface Water Screening (ESVs)

The following table provides a summary of the COCs based on screening of the surface water data.

Surface Water Screening	*Units*	*ESVs*	*Number of Samples*	*Number of Detects Above Criteria*	*Maximum Detected*	*Max Detected Location*
Parameters						
Volatile Organic Compounds						
1,2,4-Trichlorobenzene	ug/L	50	69	4	83 K	STATION-J
1,2-Dichlorobenzene	ug/L	14	69	40	580 K	STATION-L
1,3-Dichlorobenzene	ug/L	52	69	6	98 K	STATION-J
1,4-Dichlorobenzene	ug/L	16	69	36	1200 K	STATION-L
Benzene	ug/L	98	69	9	1400	STATION-Z
Carbon disulfide	ug/L	0.92	69	1	2 B	STATION-J
Carbon tetrachloride	ug/L	9.8	69	4	50 K	STATION-J
Chlorobenzene	ug/L	64	69	27	2600	STATION-Z
Metals						
Aluminum (Dissolved)	ug/L	87	18	1	108	STATION-G
Cadmium (Dissolved)	ug/L	0.25	18	5	1.0 J	STATION-N
Manganese (Dissolved)	ug/L	120	18	18	10200	STATION-L
Mercury (Dissolved)	ug/L	0.77	69	13	5.4 L	STATION-G
Silver (Dissolved)	ug/L	0.36	18	5	1.5 J	STATION-N
General Chemistry						
Chloride	ug/L	230000	17	17	900000	STATION-H

4.26.5 IDENTIFICATION OF KEY COCS

This section presents a review of the screening results with the objective of defining Key COCs for AOC 8. The results of both the sediment and surface water screening are discussed.

The Key COCs identified for sediment and surface water in AOC 8 are mercury, manganese, total chlorinated benzenes, and benzene. Total chlorinated benzenes are defined as 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene and chlorobenzene. The identification of Key COCs was based on potential direct toxic effects on aquatic biota as documented in the ERA Report. The Key COCs are Site-related or, in the case of manganese, related to geochemical conditions created by Site activities. The ERA considers the ESVs and develops Cleanup Goals for the Key COCs in sediment and surface water. A detailed discussion is provided in the ERA Report.

Key COCs in Sediment

Key COCs in sediments are mercury, manganese, the chlorinated benzenes, and benzene. The Key COCS were identified based on direct toxic effects on aquatic benthos. The chlorobenzenes, mercury (both divalent and methylmercury) will potentially bioaccumulate in benthic invertebrates and fish via the food chain. Therefore, these Key COCs may pose risk to piscivorous wildlife and aerial insectivores, which consume adult stages of benthic insects. Manganese does not readily bioaccumulate.

Figure 4.26.8 presents a "dot-plot" of the mercury concentrations in sediment (0-0.5 ft.). Mercury concentrations exceeded the ESV of 0.15 mg/kg and the Cleanup Goal of 10 mg/kg at all sample locations. The highest concentrations were detected at the west end of the Tributary. Mercury results ranged from 1,920.0 mg/kg at Chem-1, located at the west end of the Tributary to 64.9 mg/kg at STATION J, located in the center portion of the Tributary. Mercury results in the east end of the Tributary were significantly lower than the west end and ranged from 24.0 mg/kg at Chem-5 to 85.7 mg/kg at CHEM-6.

Figure 4.26.9 presents a "dot-plot" of the manganese concentrations in sediment (0-0.5 ft.). Manganese concentrations exceeded the ESV of 460 mg/kg at all Tributary STATIONS except STATION H and exceeded the Cleanup Goal of 1,200 mg/kg at STATIONS L, M and N, located at the east end of the Tributary. Concentrations were lowest in the central portion of the Tributary, highest at the east end of the Tributary, and elevated at the west end of the Tributary.

Figure 4.26.10 presents a "dot-plot" of the total chlorobenzenes concentrations in sediment (0-0.5 ft.). Total chlorobenzenes concentrations exceeded the Cleanup Goal of 33 mg/kg at four locations, Chem-4, Chem-5, and STATIONS K and L. Concentrations ranged from 58.06 mg/kg, Chem-5, to 565.55 mg/kg, Chem-4. The distribution of benzene is similar to that of the total chlorobenzenes.

Key COCs in Surface Water

Key COCs in water are mercury, manganese, the chlorinated benzenes, and benzene. These COCS were selected based on ESVs that consider potential direct toxic effects on aquatic biota from exposure across the gills. As with these same chemicals in sediments, the chlorobenzenes and mercury may pose indirect toxicity, via the food chain, to consumers of water column species. Manganese does not readily bioaccumulate.

Figure 4.26.11 present a "dot-plot" of the dissolved mercury concentrations in surface water. The figure presents the average concentration at each STATION for the sampling

period of 2007 through March 2008 (six sampling dates), except STATIONs S through Z which have been sampled only once (March 2008). Figure 4.26.12 presents the dissolved mercury results at each STATION (STATIONS G through N) for each sampling event performed from December 2004 through March 2008. In the western end of the Tributary, at STATION G and nearby STATIONS S, T, U and V, dissolved mercury concentrations exceeded the ESV and Cleanup Goal of 0.77 ug/L. At all other STATIONS, the dissolved mercury concentrations were below the criteria or not detected.

Figure 4.26.13 presents a "dot-plot" of the dissolved manganese concentrations in surface water from the February 2008 sampling event. Dissolved manganese data is also available from the surface water sampling performed in 2004, at which time surface water samples were analyzed for a parameter list that included TAL metals (total and dissolved). Figure 4.26.14 presents a chart comparing the 2004 and 2008 dissolved manganese results. Dissolved manganese results from 2008 exceeded the ESV of 120 ug/L at all the STATIONS and exceeded the Cleanup Goal of 1,300 ug/L at STATION I through N. At all STATIONS, (STATIONS G through N) the dissolved manganese concentrations were higher in 2008 than in 2004.

Figure 4.26.15 presents a "dot-plot" of the total chlorobenzenes concentrations in surface water. The figure presents the average concentration at each STATION for the sampling period of 2007 through March 2008 (six sampling dates), except STATIONs S through Z which have been sampled only once (March 2008). Figure 4.26.16 presents the total chlorobenzenes results at each STATION (STATIONs G through N) for each sampling event performed from December 2004 through March 2008. As shown on the dot-plot, the average total chlorobenzenes concentrations exceeded the Cleanup Goal of 620 ug/L at STATIONs K, L, W and Z. Chlorobenzenes concentrations generally increased from the west end of the Tributary to the east end of the Tributary, with a peak at STATIONs K and L and decrease at M and N. Average concentrations at STATIONs on the east end of the Tributary ranged from 3.31 ug/L, STATION G, to 40.17 ug/L, STATION I. Average Concentrations at STATIONs on the west end of the Tributary ranged from 41.83 ug/L, STATION N, to 3,189 ug/L at STATION Z. As shown on Figure 4.26.16, there is a decrease in the total chlorobenzenes concentrations from 2004 to 2008. The distribution of benzene in surface water is similar to that of the total chlorobenzenes.

Parameters Not Retained as Key COCs

Results of the risk screening indicated that parameters other than the Key COCs exceeded the ESVs in sediment and surface water. These parameters were determined to be not a concern and are summarized following the discussion of Key COCs. A large number of chemicals exceeded the ESVs in sediments, while exceedances of the ESVs in

surface water were more limited. The higher number of exceedances in sediments is largely due to the conservative nature of the ESVs. Most of the ESVs are co-occurrence sediment quality benchmarks (Co-SQBs) because they are ostensibly based on co-occurrence of chemical concentrations and impacts to benthic invertebrates. However, more recent analyses demonstrate that these ESVs are not indicators of toxicity, but are really just indices of background concentrations (*Smith and Jones 2005, 2006, Smith 2007, 2008*).

In this respect, it is notable that the concentrations in the upstream reference location[1] also tended to exceed these ESVs. The table below presents the concentrations in sediment from the upstream reference location (background) and in sediment from the Tributary. As can be seen, many of the metals concentrations at the reference location also exceeded the conservative ESVs, and most metals concentrations found in the Tributary were not noticeably elevated above background concentrations or the ESVs.
The notable exceptions to this are the Site-related chemicals, mercury and manganese. Manganese was not used or released at the site, but it might be related to alteration of redox conditions in groundwater associated with chlorobenzene contamination. Given concerns about the validity of the ESVs and the likelihood that most of the metals found in sediments were not Site-Related, the ERA focused on these two metals, as well as chlorinated benzenes, as Key COCs.

Comparison of Sediment Concentrations from Tributary and Reference Location to ESVs. All concentrations in mg/kg.

Parameters	Sediment ESV	Background Reference Site	Mean, Tributary	Ratio, Tributary Mean to Reference
Aluminum	25500	19300.0	15400.0	0.8
Antimony	2	1.1	0.8	0.7
Arsenic	8	**26.1**	**16.1**	0.6
Barium	500	161.0	85.2	0.5
Beryllium		1.5	1.0	0.7
Cadmium	1	**1.3**	**2.5**	2.0
Calcium		2150.0	3147.8	1.5
Chromium Total	26	**76.5**	**99.8**	1.3
Cobalt	50	13.8	32.6	**2.4**
Copper	34	**46.6**	32.0	0.7
Iron	20000	**37000.0**	**22711.1**	0.6
Lead	47	**86.5**	45.5	0.5
Magnesium		4540.0	5572.2	1.2

[1] The reference location for the 2004 sediment sample was located on Red Lion creek approximately 1 mile upstream of the Rte. 9 bridge. This far upstream location was chosen to eliminate effects of the Metachem Site, which is immediately upstream of the Site.

Parameters	Sediment ESV	Background Reference Site	Mean, Tributary	Ratio, Tributary Mean to Reference
Manganese	460	318.0	**1292.2**	**4.1**
Mercury-SW7471	0.15	**0.7**	**263.0**	**375.8**
Parameters	Sediment ESV	Background Reference Site	Mean, Tributary	Ratio, Tributary Mean to Reference
Mercury-E1631	0.15	**2.5**	**243.0**	**97.6**
Nickel	21	**23.9**	**37.8**	1.6
Potassium		1740.0	2203.3	1.3
Selenium	1.0	0.8	**2.9**	**3.4**
Silver	1.0	0.3	0.3	1.1
Sodium		230.0	2524.4	**11.0**
Thallium		0.3	0.6	1.9
Vanadium	57	46.5	**58.1**	1.3
Zinc	150	**291.0**	**334.9**	1.2

Reference Site is the reference location for 2004 sediment samples. Mean tributary concentrations are average concentrations for Stations G through N for the 2004 sediment sample. The following are bolded: metals concentrations that are greater than ESV or ratios of Tributary concentrations to background concentrations > 2.

Sediment screening also identified several VOCs and SVOCs present above the ESVs, other than the Key COCs. Two VOCs, acetone and carbon disulfide were detected above the ESVs. Acetone is a known laboratory contaminant and is not considered further. Carbon disulfide is a natural product of anaerobic biodegradation of biological material and is therefore not a concern. Four SVOCs were detected above the ESVs; 2-Methylnapthalene, bis(2-Ethylhexyl)phalate, Napthalene, and Pyrene. As discussed previously, observed concentrations of these chemicals are 1/20th or less ESVs produced with good science methods proposed by USEPA and others.

Surface water screening identified several VOCs, metals and chloride present above the ESVs, other than the Key COCs. No SVOCs were detected in the surface water above the ESVs. Two VOCs, carbon disulfide and carbon tetrachloride were detected above the ESVs. Carbon disulfide exceeded the ESV in 1 of 69 samples. It is a natural product of anaerobic biodegradation of biological material and is therefore not a concern. Carbon tetrachloride exceeded the ESV in 4 of 69 samples. It is a Site-related COC detected in groundwater in AOC 9. It's not considered to be an ecological risk in the Tributary. Three dissolved metals, aluminum, cadmium and silver were detected above the ESVs. However, the exceedances are small, these metals are not likely-site related, and potential toxicity is unlikely in the high carbon environment of the Tributary. Chloride was detected above the ESV in all 17 samples. Red Lion Creek is historically an estuarine system. It also periodically receives water from the Delaware River when the Tide Gates are clogged with trees and brush. In addition, the biota in this system are adapted to brackish water, for which the freshwater Cl ESV is inappropriate.

4.26.6 CONCEPTUAL MODEL

The Conceptual Model section lays the foundation for the development of remedial actions. The discussion considers only Key COCs and potential exposure pathways identified above. For AOC 8, mercury, manganese, chlorinated benzenes and benzene are considered to be the Key COCs in sediment and surface water related exclusively to the ecological receptors.

AOC 8 is oriented east-west and is approximately 1,500 feet long by 10 to 250 feet wide and covers an area of approximately four acres. It ranges in depth from a few inches to two feet. The presence of the Tributary, its configuration, size, and ecological habitat are linked to the existence and operational history of the tide gate at the mouth of Red Lion Creek. The Tributary is surrounded by a marsh area dominated with a dense growth of common reed (*Phragmites*).

Cross Sections and Groundwater Discharge

The relationship between the groundwater and the Tributary varies spatially. Thus, four conceptual models are presented for the Tributary.

Figures 4.26.17 and 4.26.18 present four schematic cross sections through the Tributary. Figure 4.26.17, Section A, presents the Tributary near STATION-N. The Tributary is bordered on both sides by the phragmites marsh. There is a layer of sediments within the phragmites, defined in the *AOC 12 Investigation Report* as the "Shallow Marsh Sediments" (SMS). These SMS have accumulated since vegetation began to grow in the marsh (1987) when the tide gate was repaired. In AOC 12, vegetation first appeared around 1960 (based on aerial photographs). The SMS are 50 to 80% water by weight and could transmit water. However, there is typically a thin layer of water, up to several inches deep, overlying the SMS. This layer of water is approximately the same elevation as the Tributary surface water. As a result, there is essentially no hydraulic gradient within the SMS, and no significant horizontal flow occurs through the SMS. Underlying the SMS are the Recent Sediments. The Recent Sediments are generally very low permeability, which inhibit horizontal groundwater flow through these recent sediments.

Figure 4.26.17, Section B, presents the Tributary near STATION L, north of WL-1. The Columbia Sands are in direct contact with the Tributary surface water. Where this condition occurs, groundwater can freely discharge to the Tributary.

Figure 4.26.18, Section C, presents the Tributary near STATION J, also next to AOC 12, the marsh area north of the Standard Chlorine Pipeline. Investigations in 2007 identified the SMS and the standing water in the phragmites. The Columbia Sands are confined by the Recent Sediments, and there is no discharge of groundwater from the Columbia Sands to the Tributary in this area. There is however, a limited groundwater discharge from the Fill overlying the Recent Sediments. This discharge is limited and occurs as seeps at the toe of the slope and along the flat area between the toe of the slope and the Phragmites.

Figure 4.26.18, Section D, presents a section through the Tributary near STATION G, north of the Process Area. Like Section B, Figure 4.26.17, near WL-1, the Columbia Sands are in direct contact with the Tributary surface water. The Tributary bottom is sandy along the southern edge of the Phragmites, but it quickly becomes clayey/silty away from this margin.

The areas of groundwater discharge are depicted by Sections B and D in Figures 4.26.17 and 4.26.18, respectively. This direct communication between the Columbia Sands and the Tributary surface water represent less that 10% of the Tributary bottom. The current estimates of groundwater discharge to the Tributary are approximately 75 gpm north of the Process Area, and 30 gpm north of WL-1. There is minimal to no discharge of groundwater across most of the Tributary area, as depicted in Sections A and C in Figures 4.26.17 and 4.26.18 respectively.

Surface Water Flow in the Tributary

The Tributary discharges to Red Lion Creek. There are two potential pathways of surface water flow: one flowing west to east following the general axis of the Tributary, and a second flowing due north via the thin layer of water in the Phragmites overlying the SMS. Specific flow patterns are not defined and are not critical to the AOC 8 remedy. The surface water quality data in the Tributary suggest that there is a difference between surface water in the eastern and western portions of the Tributary, with a dividing or transition in the vicinity of STATION-I.

Sediments in the Bottom of the Tributary

Approximately six to seven inches of Tributary bottom sediments have accumulated since the plant began operations in 1965. This was demonstrated by fine-resolution core sampling completed in 2006 and documented in the Report entitled *"Tributary Investigations 2006-March 2008: Report of Results", July 2008*. Site-related mercury impacts are found only in these sediments.

Two likely sources for the elevated mercury for the Tributary sediments have been hypothesized.

1.) Mercury contaminated groundwater discharges to the Tributary, and then precipitates or partitions to suspended sediments, ultimately settling out in the Tributary. The transition from a dissolved form of mercury that moves readily in groundwater to a relatively immobile form that settles out could be due to change in mercury species (i.e., from elemental to divalent) and/or a change in sorptive environment from carbon-poor aquifer to carbon-rich tributary water.
2.) Mercury in sediments in ditches transported to the Tributary via stormwater runoff. The relative importance of these two presumptive sources, now or historically, is uncertain. Mercury concentrations in sediments and water are much higher in sediments near STATION G. Estimates of mercury loading via groundwater appear to be too small to have produced the inventory of mercury found in the Tributary sediments, suggesting that overland flow could be the primary source of mercury.

Completed Site-activities (controlling runoff and cleaning up drainage ditches), and future Site-remedies (capping and controlling groundwater discharge) will control both of these sources of mercury.

The distribution of chlorobenzenes in the Tributary Sediments is very different from that of mercury. Chlorobenzene impacts are not present north of the Process Area, and only begin near STATION-I. In the area where chlorobenzenes are present, impacts have been observed to depths as great as 10 feet. Thus, the source of chlorobenzenes is very different from the mercury. The presence of chlorobenzenes to depths of 10 feet beneath the Tributary suggest a possible bottom-up origin, i.e., contamination via upwelling groundwater. However, chlorobenzenes are found at depth in Recent Sediments that are fine clays, through which groundwater upwelling is essentially zero. More likely, chlorobenzenes contamination of shallow and deep sediments came from the top-down, associated with historical surface releases of DNAPL or very high concentration water, that spread out into the Tributary. This scenario suggests that chlorobenzenes contamination in deep sediments beneath the Tributary is due to downward penetration of DNAPL or diffusion that occurred in the past. Currently, input of CBs to the Tributary occurs via groundwater.

4.26.7 CORRECTIVE ACTION OBJECTIVES

Corrective action objectives (CAOs) have been developed to protect human health and the environment for the current land use and for potential future land uses of the Site. The CAOs consider the Cleanup Goals for the Site and the potential exposure and transport pathways identified for AOC 8. The CAOs are the basis for the identification of remedial actions to be considered for AOC 8.

The remedial approach for AOC 8 sediments will be to eliminate pathways and eliminate the sources of the Key COCs. The sources are located in other SWMUs and AOCs and include groundwater discharge from the Site to the Tributary and potential transport of sediments via stormwater runoff from the Site to the Tributary. Groundwater remedies are presented in the Groundwater Focused Feasiblity Study (GWFFS). A Draft GWFFS was submitted to EPA in June 2007. Remedies to address the other potential sources are presented in this CMS Report.

The remedial approach for AOC 8 surface water will be to eliminate the sources of the Key COCs. The sources are located in other SWMUs and AOCs and include groundwater discharge from the Site to the Tributary surface water and potential transport of sediments via stormwater runoff from the Site to the Tributary surface water. Groundwater remedies are presented in the GWFFS. Remedies to address the other potential sources are presented in this CMS Report.

The CAOs for AOC 8 are summarized below:

The CAOs consider preliminary Cleanup Goals that have been identified for use in the CMS and have been developed in the Ecological Risk Assessement. These preliminary Cleanup Goals may change based on continued development of the Ecological Risk Assessment and USEPA's review of the Draft Ecological Risk Assessment Report, scheduled for submittal in September 2008.

Sediment (in the biologically active zone: 0-2 inches)

- Eliminate direct contact of biota with sediments containing mercury, manganese, chlorobenzenes, and benzene by:
  - Achieving the preliminary Cleanup Goals in surface sediments:
    -Mercury: 10 mg/kg (Short-Term Goal)
    -Manganese: 1,200 mg/kg (Long-Term Goal)
    -Total CBs: 33 mg/kg (Long-Term Goal)
    -Benzene: *To be determined* (Long-Term Goal)

  and/or by
  - Pathway elimination

  and/or by

- Source control:
  - Stop or treat groundwater discharge to the Tributary
  - Control transport of sediments to the Tributary via stormwater runoff

Surface Water

- Eliminate direct contact of biota with surface water containing mercury, manganese, chlorobenzenes, and benzene by:
  - Achieving the preliminary Cleanup Goals in surface water:
    -Mercury 0.77 ug/L, dissolved (Short-Term Goal)
    -Manganese: 1,200 ug/L, dissolved (Long-Term Goal)
    -Total CBs 620 ug/L (Long-Term Goal)
    -Benzene 200 ug/L (Long-Term Goal)

  and/or by
  - Source control:
    - Stop or treat groundwater discharge to the Tributary
    - Control transport of sediments to the Tributary via stormwater runoff

4.26.8 FINAL REMEDY EVALUATION

Potential alternatives have been developed to meet the CAOs for AOC 8 sediments as presented in Section 4.26.7. AOC 8 surface water will be remediated by source control remedies as discussed in Section 1.0. Remedies are presented in this CMS Report for other AOCs and SWMUs that have been identified as sources or potential sources of the Key COCs in the Tributary surface water.

The following potential alternatives are identified for AOC 8 sediments:

- Alternative 1 – Institutional Controls and Monitoring
- Alternative 2 – Engineered Capping
- Alternative 3 – Dredging and Backfilling
- Alternative 4 – Reactive Capping (East Tributary)
  and Dredging and Backfilling (West Tributary)
- Alternative 5 – Dredging and Reactive Capping (East Tributary)
  and Dredging and Backfilling (West Tributary)

The following sections provide a description of each alternative, an initial threshold screening for each alternative, and a detailed analysis based on the five Resource Conservation and Recovery Act (RCRA) balancing criteria.

4.26.8.1 DESCRIPTION OF ALTERNATIVES

This section provides a description of each potential alternative. Every alternative includes long-term performance monitoring.

Alternative 1 – Long-Term Monitoring

This alternative is identified and considered as a baseline for comparison to other alternatives. Alternative 1 consists of a long-term monitoring program at AOC 8 to allow the area to safely recover naturally. Under this alternative no direct remedial action would take place.

Alternative 1 includes attenuation by naturally occurring physical, chemical, and biological processes like bioturbation, biodegradation, biotransformation, diffusion, dispersion, dilution, sorption, resuspension, and potential future burial by deposition of clean sediment to reduce the bioavailability of contaminants. Some or all of these processes may be occurring at any given time and location in the Tributary. In some cases, these processes transfer some or all of the mass of contaminants (or derivative

end-products) to and from the sediment and overlying water. The net result of such processes is attenuation of the concentration of the contaminants within the sediment. However, this is likely to be a very slow process that may not be effective in the near term. A long-term monitoring program would be instituted to investigate the natural recovery processes at the Site to demonstrate that contaminant reduction (or reduction in the bioavailability of contaminants) is occurring and that the reduction is achieving Cleanup Goals. Sediment and water column sampling would be conducted during the 1st, 3rd, and 5th years, and every 5 years thereafter for a duration of 30 years.

Alternative 2 – Engineered Capping

Alternative 2 consists of placing an engineered cap over the entire surface of the Tributary. In the eastern portion of the Tributary (East Tributary), the cap would consist of an organoclay matting layer held in place by a 6-inch clean sand layer (including a 3-inch over-placement allowance). In the western portion of the Tributary (West Tributary), the cap would consist of an enhanced sand cap. Figure 4.26.19 presents a plan view of Alternative 2.

It is anticipated that an approximately 2-centimeter (cm)-thick organoclay matting layer would be placed over the entire 3.17-acre East Tributary. However, the specific areal extent of the organoclay matting layer would be based on Site-specific constituents and results of future pre-design investigations (if needed). The organoclay matting layer would consist of organoclay material bound between an upper and lower geotextile layer. The organoclay matting layer is a semi-permeable mat, which allows water to flow through it, while retaining contaminants in the organoclay material. The organoclay matting would be placed utilizing standard marine construction equipment and would be secured to the bottom surface by a 6-inch clean sand layer (including a 3 inch overplacement allowance). Figure 4.26.20 presents a conceptual capping cross section.

A 6-inch clean sand cap (with an additional 6 inches of overplacement allowance) containing 1 to 2 percent total organic carbon (TOC) or an alternate mercury-specific media would be placed over the 0.97-acre West Tributary. The composition of the amendment (and the specific mode of application) would be determined during future pre-design investigations (if needed). Under this alternative, clean sand would be transported to the Site and placed mechanically, utilizing an excavator equipped with a clamshell bucket operating from swamp mats, or other equivalent technology. If amendments are needed, they may either be applied on site, or mixed at the sand source and delivered to the site.

Upon completion of the remedial action, a long-term monitoring program would be instituted to monitor the integrity of the cap. Cap and water column sampling would be conducted during the 1st, 3rd, and 5th years following construction, and every 5 years thereafter for a duration of 30 years. Cap maintenance would be performed, if needed, and is assumed to occur at a frequency of once every 5 years for a duration of 30 years.

Alternative 3 – Dredging and Backfilling

Alternative 3 consists of dredging the entire Tributary to a depth of 6 inches (with an additional 6-inch overdredge allowance) and placing a 6-inch clean sand backfill layer (with an additional 6-inch overplacement allowance) over the entire dredged area. A portion of the eastern tributary area will receive enhanced sand backfill (i.e., sand enhanced/amended with activated carbon type material), depending on pre-dredging depth-wise concentration profiles of Chlorobenzenes. Figure 4.26.21 presents a plan view of the Alternative 3.

The upper 6 inches of sediments (with an additional 6-inch overdredge allowance) would be dredged from the Tributary using either mechanical or hydraulic dredging methods. The dredged sediments would be dewatered using conventional dewatering technologies, such as plate and frame filter presses, belt filter presses, hydrocyclones, centrifugation, geotubes, and/or gravity drainage. If necessary, the dewatered sediment would be stabilized with Portland cement, or equivalent, prior to transport to the existing on-site landfill (i.e., New Brine Sludge Landfill) for disposal. The process water would be treated with a water treatment system preliminarily assumed to consist of a sand and carbon filter system. Water treatment system details would be refined during the project design phase. Following dredging, the Tributary would be backfilled with 6 inches of clean sand (with a 6-inch overplacement allowance). Figure 4.26.20 presents a conceptual backfilling/capping cross section.

Alternative 3 would also include the construction and closure of Cell 3 in the existing on-site landfill (i.e., New Brine Sludge Landfill). Cell 3 would be utilized for the disposal of dredged sediments.

Alternative 4 – Reactive Capping (East Tributary) and Dredging and Backfilling (West Tributary)

Alternative 4 consists of placing a reactive cap over the East Tributary and dredging and backfilling the West Tributary. Figure 4.26.22 presents a plan view of the Alternative 4.

It is anticipated that an organoclay matting layer would be placed over the entire 3.17-acre East Tributary. However, the specific areal extent of the organoclay matting layer would be based on Site-specific constituents and results of future pre-design investigations (if needed). As described in Alternative 2, the organoclay matting would be placed utilizing standard marine construction equipment and would be secured to the bottom surface by a 6-inch clean sand layer. Figure 4.26.20 presents a conceptual reactive capping cross section.

In the West Tributary, the upper 6 inches of sediments (with an additional 6-inch overdredge allowance) would be dredged using either mechanical or hydraulic dredging methods. The dredged sediments would be dewatered using conventional dewatering technologies, such as plate and frame filter presses, belt filter presses, hydrocyclones, centrifugation, geotubes, and/or gravity drainage. If necessary, the dewatered sediment would be stabilized with Portland cement, or equivalent, prior to transport to the existing on-site landfill (i.e., New Brine Sludge Landfill) for disposal. The process water would be treated with a water treatment system preliminarily assumed to consist of a sand and carbon filter system. Water treatment system details would be refined during the project design phase. Following dredging, the West Tributary would be backfilled with 6 inches of clean sand (with a 6-inch overplacement allowance). Figure 4.26.20 presents a conceptual backfilling/capping cross section.

As described in Alternative 3, Cell 3 in the existing on-site landfill (i.e., New Brine Sludge Landfill) would be constructed for the disposal of dredged sediments from the West Tributary and subsequently closed.

Upon completion of the remedial action, a long-term monitoring program would be instituted to monitor the integrity of the cap over the East Tributary. Cap and water column sampling would be conducted during the 1st, 3rd, and 5th years following construction, and every 5 years thereafter for a duration of 30 years. Cap maintenance would be performed, if needed, and is assumed to occur at a frequency of once every 5 years for a duration of 30 years.

Alternative 5 – Dredging and Reactive Capping (East Tributary) and Dredging and Backfilling (West Tributary)

Alternative 5 consists of dredging the entire Tributary (4.14 acres) to a depth of 6 inches (with an additional 6-inch overdredge allowance). A reactive cap would then be placed over the East Tributary and a 6-inch clean sand backfill layer (with an additional 6-inch overplacement allowance) would be placed over the West Tributary. Figure 4.26.23 presents a plan view of the Alternative 5.

As described in Alternative 3, the upper 6 inches of sediments (with an additional 6-inch overdredge allowance) would be dredged from the Tributary using either mechanical or hydraulic dredging methods. The dredged sediments would be dewatered using conventional dewatering technologies, such as plate and frame filter presses, belt filter presses, hydrocyclones, centrifugation, geotubes, and/or gravity drainage. If necessary, the dewatered sediment would be stabilized with Portland cement, or equivalent, prior to transport to the existing on-site landfill (i.e., New Brine Sludge Landfill) for disposal. The process water would be treated with a water treatment system preliminarily assumed to consist of a sand and carbon filter system. Water treatment system details would be refined during the project design phase. Following dredging, a reactive cap, consisting of an organoclay matting layer and a 6-inch layer of clean sand, would be placed over the East Tributary. It is anticipated that an organoclay matting layer would be placed over the entire 3.17-acre East Tributary; however, the specific areal extent of the organoclay matting layer would be based on Site-specific constituents and results of future pre-design investigations (if needed). The West Tributary would be backfilled with 6 inches of clean sand (with a 6-inch overplacement allowance). Figure 4.26.20 presents conceptual reactive capping and backfilling/capping cross sections.

As described in Alternative 3, Cell 3 in the existing on-site landfill (i.e., New Brine Sludge Landfill) would be constructed for the disposal of dredged sediments from the West Tributary and subsequently closed.

Upon completion of the remedial action, a long-term monitoring program would be instituted to monitor the integrity of the cap over the East Tributary. Cap and water column sampling would be conducted during the 1st, 3rd, and 5th years following construction, and every 5 years thereafter for a duration of 30 years. Cap maintenance would be performed, if needed, and is assumed to occur at a frequency of once every 5 years for a duration of 30 years.

4.26.8.2 THRESHOLD SCREENING OF ALTERNATIVES

In this section, the alternatives are screened against the three RCRA final remedy performance standards: 1) protect human health and environment; 2) achieve media cleanup objectives; and 3) remediate sources of releases. The threshold screening is summarized in Table 4.26.3. An evaluation of each alternative's ability to control the potential pathways identified for AOC 8 and described in the CAOs, is provided in Table 4.26.4. Alternatives that pass the screening are retained for further evaluation.

Alternative 1 – Long-Term Monitoring

Protect Human Health and the Environment

This alternative would not be protective of human health and the environment because it does not address risks posed by the potential exposure pathway. The risks posed by the contaminants to ecological receptors would continue unabated for several decades.

Achieve Media Cleanup Objectives

The CAOs and Cleanup Goals would not be met immediately upon implementation of the alternative. Although natural recovery may result in decreasing mercury and chlorobenzene concentrations below the media Cleanup Goals, these natural recovery processes may take several decades.

Remediate Sources of Releases

The potential sources of releases would not be remediated.

Alternative 2 – Engineered Capping

Protect Human Health and the Environment

This alternative would be protective of human health and the environment because it addresses risks posed by the potential exposure pathway. The engineered cap prevents direct contact of ecological receptors with surface sediments.

Achieve Media Cleanup Objectives

The CAOs would be met immediately upon implementation of the alternative. Sediment exceeding the Cleanup Goals for mercury and chlorobenzene would remain in-place; however, the pathway would be eliminated.

Remediate Sources of Releases

This alternative would control potential source releases. The engineered capping material would prevent direct contact with sediment as well as adsorb potential dissolved contaminants.

Alternative 3 – Dredging and Backfilling

Protect Human Health and the Environment

This alternative would be protective of human health and the environment because it addresses risks posed by the potential exposure pathway. Dredging would remove contaminated sediments in the top 6 inches of the Tributary. Backfilling with clean sand (and amended/enhanced sand, where needed) following dredging would offer protection against residuals, thus preventing future direct contact of ecological receptors with surface sediments.

Achieve Media Cleanup Objectives

The CAOs would be met immediately upon implementation of the alternative. Surface sediment (up to 6 inches with an additional 6-inch overdredge allowance) exceeding the Cleanup Goals for mercury and chlorobenzenes would be removed and backfilled with clean sand.

Remediate Sources of Releases

This alternative would control potential source releases. The removal of sediments from the top 6 inches and replacement with clean sand would eliminate direct contact of ecological receptors with contaminated sediments.

Alternative 4 – Reactive Capping (East Tributary) and Dredging and Backfilling (West Tributary)

Protect Human Health and the Environment

This alternative would be protective of human health and the environment because it addresses risks posed by the potential exposure pathway. In the East Tributary, the reactive cap would prevent direct contact of ecological receptors with surface sediments. In the West Tributary, dredging would remove contaminated sediments in the top 6 inches. Backfilling with clean sand (and amended/enhanced sand, where needed) following dredging would offer protection against residuals, thus preventing future direct contact of ecological receptors with surface sediments.

Achieve Media Cleanup Objectives

The CAOs would be met immediately upon implementation of the alternative. In the East Tributary, sediment exceeding the Cleanup Goals for mercury and chlorobenzenes would remain in-place; however, the pathway would be eliminated. In the West Tributary, surface sediment (top 6 inches with an additional 6-inch overdredge allowance) exceeding the Cleanup Goals for mercury and chlorobenzenes would be removed and backfilled with clean sand; therefore the pathway would be eliminated.

Remediate Sources of Releases

This alternative would control potential source releases. In the East Tributary, the reactive capping material would prevent direct contact with sediment as well as adsorb potential dissolved contaminants. In the West Tributary, the removal of sediments and replacement with clean sand would eliminate direct contact of ecological receptors with contaminated sediments.

Alternative 5 – Dredging and Reactive Capping (East Tributary) and Dredging and Backfilling (West Tributary)

Protect Human Health and the Environment

This alternative would be protective of human health and the environment because it addresses risks posed by the potential exposure pathway. Dredging would remove sediments in the top 6 inches. In the East Tributary, placing a reactive cap following dredging would prevent direct contact of ecological receptors with any residual contaminated sediment. In the West Tributary, backfilling with clean sand (and amended/enhanced sand, where needed) following dredging would offer protection against residuals, thus preventing future direct contact of ecological receptors with surface sediments.

Achieve Media Cleanup Objectives

The CAOs would be met immediately upon implementation of the alternative. Surface sediment (top 6 inches with a 6-inch overdredge allowance) exceeding the Cleanup Goals for mercury and chlorobenzenes would be removed. The placement of a reactive cap in the East Tributary and backfilling with clean sand in the West Tributary would prevent potential direct contact of ecological receptors with any residual contaminated sediment.

Remediate Sources of Releases

This alternative would control potential source releases. The removal of sediments from the top 6 inches and replacement with a reactive cap (East Tributary) or clean sand (West Tributary) would eliminate direct contact of ecological receptors with remaining sediments.

4.26.8.3 DETAILED EVALUATION OF ALTERNATIVES

All five alternatives were retained following the threshold screening and are evaluated further in this Section. A detailed analysis of these alternatives is presented based on the five RCRA balancing criteria: 1) long-term reliability and effectiveness; 2) reduction of toxicity, mobility, and/or volume; 3) short-term effectiveness; 4) implementability; and 5) cost. A summary of the detailed analysis of alternatives is presented in Table 4.26.5. A weighted numerical ranking of the detailed analysis results is presented in Table 4.26.6.

Alternative 1 – Long-Term Monitoring

Long-Term Reliability and Effectiveness

For this alternative, the risks posed by mercury and chlorobenzene to ecological receptors would continue unabated for several decades.

Reduction of Toxicity, Mobility, and Volume

This alternative does not involve any containment or removal of contaminants from the Tributary. It relies on naturally occurring physical, chemical, and biological processes to sequester, destroy, or dilute the mercury and chlorobenzene inventories in the Tributary, resulting in the long-term decline in surface sediment and water column contaminant concentrations. Burial by cleaner sediments would also reduce the bioavailability of mercury and chlorobenzenes, and thereby reduce the toxicity to ecological receptors. The overall volume of contaminated sediments may increase with time due to natural dilution effects (potentially resulting in lower concentrations), and the chlorobenzenes may also biodegrade over time. Reductions in concentrations of mercury and chlorobenzenes sufficient to meet the Cleanup Goals would likely require several decades.

Short-Term Effectiveness

Alternative 1 is not effective; potential risks to ecological receptors would persist in the near term.

Implementability

This alternative would be fully implementable.

Cost

The estimated costs are provided in Appendix B and are summarized below. The estimated costs consider implementing long-term operating, monitoring, and maintenance (OM&M) for 30 years. The long-term OM&M program includes sediment and water column sampling.

- Long-term OM&M Cost (Present Worth): $70,000
- Alternative Total: $70,000

Alternative 2 – Engineered Capping

Long-Term Reliability and Effectiveness

Alternative 2 would be reliable and effective. The engineered cap would cover contaminated sediments (entire Tributary) and adsorb potential dissolved contaminants that come into contact with the organoclay matting (East Tributary).

Reduction of Toxicity, Mobility, and Volume

Under Alternative 2, there would be an effective reduction in the toxicity and mobility of mercury and chlorobenzenes in the sediment as the placement of the engineered cap would cover the contaminated sediments and remove the direct exposure pathway as well as adsorb potential dissolved contaminants associated with sediment toxicity. There is no removal/treatment and there would be no reduction in the volume of contaminated sediment present in the Tributary.

Short-Term Effectiveness

The engineered capping would immediately limit the exposure of contaminated sediments and mobility of potential dissolved contaminants located in the Tributary.

During construction, the risks to human health are expected to be controlled through personal protective equipment (PPE). Although containment barriers and operational controls would be employed (as necessary), there would be a slight potential for adverse impacts to the environment from release of resuspended contaminated sediment during the placement of the engineered cap.

Implementability

This alternative would be fully implementable. Engineered capping would be accomplished through mechanical placement methods utilizing an excavator operating off swamp mats, or other comparable method.

Cost

The estimated costs are provided in Appendix B and are summarized below. The estimated costs consider construction costs and long-term OM&M for 30 years. The long-term OM&M program includes cap and water column sampling as well as cap thickness measurements. Cap maintenance would be performed as necessary and is assumed to occur every 5 years for a duration of 30 years.

- Construction Total (without engineering design and contingency): $2,059,000
- Long-term OM&M Cost (Present Worth): $112,300
- Alternative Total: $3,100,000

<u>Alternative 3 – Dredging and Backfilling</u>

Long-Term Reliability and Effectiveness

Alternative 3 would be reliable and effective. The dredging operations would remove contaminated surface sediments (top 6 inches plus 6-inch overdredge allowance). Dredging in the East Tributary would potentially expose deeper sediments with higher chlorobenzene concentrations. However, the backfilling operations would serve as a buffer between any contaminated sediments present beneath the dredge prism and the surface water/sediments of the Tributary.

Reduction of Toxicity, Mobility, and Volume

The dredging operations would provide an immediate reduction in volume and mass of contaminated sediment. Dredging in the East Tributary would potentially expose deeper sediments with higher chlorobenzene concentrations. However, the backfilling would cover any remaining contaminated sediments and eliminate the direct exposure

pathway for residual contaminated materials. Cover materials would also retard the mobility of potentially dissolved contaminants associated with sediment toxicity.

Short-Term Effectiveness

The dredging would provide an immediate reduction in the volume and mass of contaminants present in the sediments of the Tributary. Dredging in the East Tributary would potentially expose deeper sediments with higher chlorobenzene concentrations. However, the backfilling would effectively remove the direct contact exposure pathway between any contaminated sediment present beneath the dredge prism or residual contaminated material, and retard the mobility of potential dissolved contaminants. During construction, the risks to human health are expected to be controlled with PPE.

Implementability

This alternative would be fully implementable. Dredging and backfilling would be accomplished through mechanical removal and placement methods utilizing an excavator operating off swamp mats, or other comparable technologies.

Cost

The estimated costs are provided in Appendix B, and are summarized below. The estimated costs consider construction costs.

- Construction Total (without engineering design and contingency): $3,268,000
- Alternative Total: $4,700,000

Alternative 4 – Reactive Capping (East Tributary) and Dredging and Backfilling (West Tributary)

Long-Term Reliability and Effectiveness

Alternative 4 would be reliable and effective. In the East Tributary, the reactive cap would cover contaminated sediments and adsorb potential dissolved contaminants that come into contact with the organoclay matting layer. In the West Tributary, the dredging operations would remove surface sediments with higher concentrations (top 6 inches plus 6-inch overdredge allowance), while the backfilling operations would serve as a buffer between any contaminated sediments present beneath the dredge prism and the surface water/sediments of this portion of the Tributary.

Reduction of Toxicity, Mobility, and Volume

Alternative 4 would be reliable and effective. In the East Tributary, the reactive cap would cover the contaminated sediments and remove the direct exposure pathway. It would also adsorb potential dissolved contaminants. In the West Tributary, the dredging operations would provide an immediate reduction in the volume and mass of contaminated sediments present in this portion of the Tributary. The backfilling would cover any residual contaminated sediments and remove the direct exposure pathway. Cover materials would also retard the mobility of potentially dissolved contaminants associated with sediment toxicity.

Short-Term Effectiveness

In the East Tributary, the reactive capping would limit the exposure of contaminated sediments and the mobility of potential dissolved contaminants. In the West Tributary, the dredging would provide an immediate reduction in the volume and mass of contaminants present in the sediments and surface water of this portion of the Tributary. The backfilling would effectively remove the direct contact exposure pathway and retard the mobility of potential dissolved contaminants. During construction, the risks to human health are expected to be controlled with PPE.

Implementability

This alternative would be fully implementable. Reactive capping, dredging, and backfilling would be accomplished through mechanical removal and placement methods utilizing an excavator operating off swamp mats, or other comparable technologies.

Cost

The estimated costs are provided in Appendix B and are summarized below. The estimated costs consider construction costs and long-term OM&M for 30 years. The long-term OM&M program includes cap and water column sampling as well as cap thickness measurements. Cap maintenance would be performed as necessary and is assumed to occur every 5 years for a duration of 30 years.

- Construction Total (without engineering design and contingency): $3,102,000
- Long-term OM&M Cost (Present Worth): $105,000
- Alternative Total: $4,600,000

Alternative 5 – Dredging and Reactive Capping (East Tributary) and Dredging and Backfilling (West Tributary)

Long-Term Reliability and Effectiveness

Alternative 5 would be reliable and effective. The dredging operations would remove surface sediments (top 6 inches plus 6-inch overdredge allowance). In the East Tributary, dredging would potentially expose deeper sediments with higher chlorobenzene concentrations; however, the reactive cap would isolate such sediments and adsorb potential dissolved contaminants that come into contact with the organoclay matting layer. In the West Tributary, the backfilling operations would serve as a buffer between any contaminated sediments present beneath the dredge prism and the surface water/sediments of this portion of the Tributary.

Reduction of Toxicity, Mobility, and Volume

The dredging operations would provide an immediate reduction in the volume and mass of contaminated sediments present in the Tributary. In the East Tributary, dredging would potentially expose deeper sediments with higher chlorobenzene concentrations; however, the reactive cap would isolate such sediments thus removing the direct exposure pathway. The reactive cap would also adsorb potential dissolved contaminants associated with sediment toxicity. In the West Tributary, the backfilling would remove the direct exposure pathway for potential residual contaminated material. Cover materials would also retard the mobility of potentially dissolved contaminants associated with sediment toxicity.

Short-Term Effectiveness

In this Alternative, the dredging would provide an immediate reduction in the volume and mass of contaminants present in the sediments of the Tributary. In the East Tributary, dredging would potentially expose deeper sediments with higher chlorobenzene concentrations; however, the reactive cap would immediately limit the exposure of contaminated sediments and mobility of potential dissolved contaminants located in the Tributary. In the West Tributary, the backfilling would effectively remove the direct contact exposure pathway between any contaminated sediment present beneath the dredge prism or residual contaminated material, and retard the mobility of potential dissolved contaminants. During construction, the risks to human health are expected to be controlled with PPE.

Implementability

This alternative would be fully implementable. Dredging and reactive capping would be accomplished through mechanical removal and placement methods utilizing an excavator operating off swamp mats, or other comparable technologies.

Cost

The estimated costs are provided in Appendix B and are summarized below. The estimated costs consider construction costs and long-term OM&M for 30 years. The long-term OM&M program includes cap and water column sampling as well as cap thickness measurements. Cap maintenance would be performed as necessary and is assumed to occur every 5 years for a duration of 30 years.

- Construction Total (without engineering design and contingency): $3,943,000
- Long-term OM&M Cost (Present Worth): $105,000
- Alternative Total: $5,800,000

4.26.9 PROPOSED REMEDY

Based on the detailed evaluation of the five alternatives, Alternative 4 – Reactive Capping (East Tributary) and Dredging and Backfilling (West Tributary) is the most environmentally protective and cost effective remedy for this Site. Alternative 4 is the most cost-effective remedy (estimated cost of approximately $4,600,000) and meets each of the five balancing criteria. Alternative 4 is protective of the environment, and is effective in the near term and in the long term. Alternative 4 reduces the toxicity, mobility, and volume of the contaminated sediments in the Tributary and satisfies the CAOs.

FIGURES

LEGEND

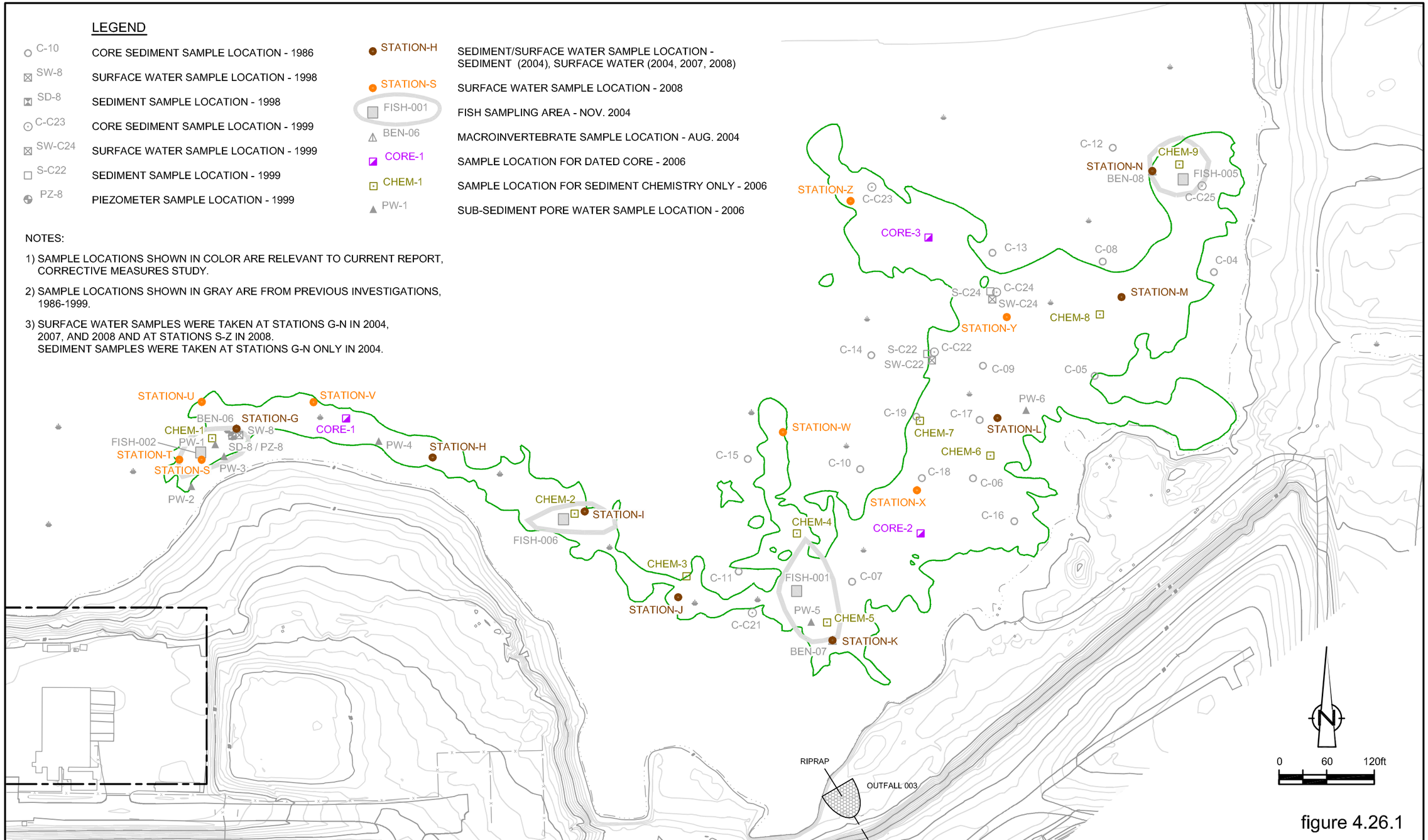
C-10	CORE SEDIMENT SAMPLE LOCATION - 1986
SW-8	SURFACE WATER SAMPLE LOCATION - 1998
SD-8	SEDIMENT SAMPLE LOCATION - 1998
C-C23	CORE SEDIMENT SAMPLE LOCATION - 1999
SW-C24	SURFACE WATER SAMPLE LOCATION - 1999
S-C22	SEDIMENT SAMPLE LOCATION - 1999
PZ-8	PIEZOMETER SAMPLE LOCATION - 1999
STATION-H	SEDIMENT/SURFACE WATER SAMPLE LOCATION - SEDIMENT (2004), SURFACE WATER (2004, 2007, 2008)
STATION-S	SURFACE WATER SAMPLE LOCATION - 2008
FISH-001	FISH SAMPLING AREA - NOV. 2004
BEN-06	MACROINVERTEBRATE SAMPLE LOCATION - AUG. 2004
CORE-1	SAMPLE LOCATION FOR DATED CORE - 2006
CHEM-1	SAMPLE LOCATION FOR SEDIMENT CHEMISTRY ONLY - 2006
PW-1	SUB-SEDIMENT PORE WATER SAMPLE LOCATION - 2006

NOTES:

1) SAMPLE LOCATIONS SHOWN IN COLOR ARE RELEVANT TO CURRENT REPORT, CORRECTIVE MEASURES STUDY.

2) SAMPLE LOCATIONS SHOWN IN GRAY ARE FROM PREVIOUS INVESTIGATIONS, 1986-1999.

3) SURFACE WATER SAMPLES WERE TAKEN AT STATIONS G-N IN 2004, 2007, AND 2008 AND AT STATIONS S-Z IN 2008.
SEDIMENT SAMPLES WERE TAKEN AT STATIONS G-N ONLY IN 2004.



TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007,
DELAWARE STATE PLANE,
NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

figure 4.26.1

AOC 8 - TRIBUTARY
LOCATION MAP AND RELEVANT SAMPLE LOCATIONS
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

07462-99912(047)GN-WA069 JUL 21/2008

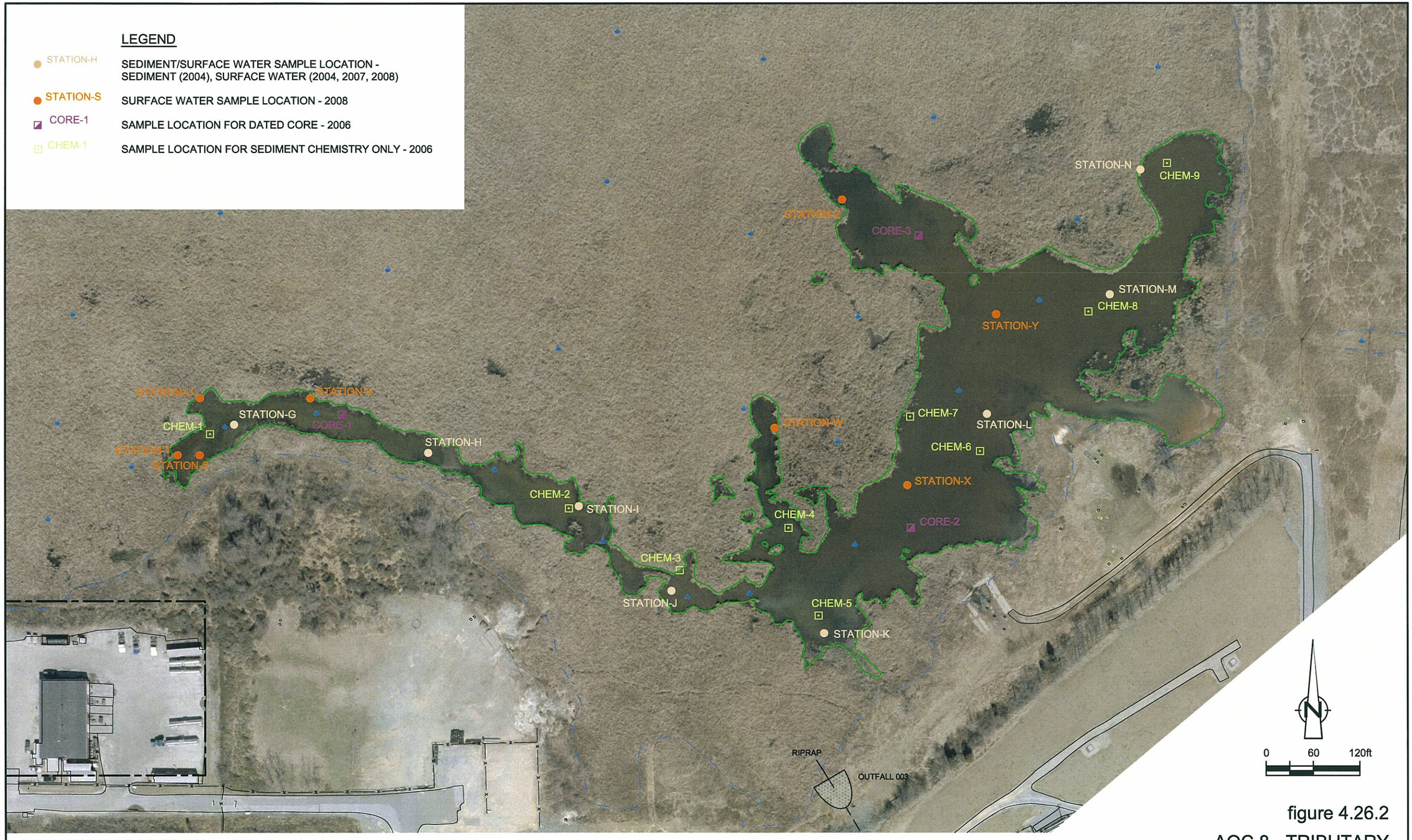
LEGEND

STATION-H — SEDIMENT/SURFACE WATER SAMPLE LOCATION - SEDIMENT (2004), SURFACE WATER (2004, 2007, 2008)

STATION-S — SURFACE WATER SAMPLE LOCATION - 2008

CORE-1 — SAMPLE LOCATION FOR DATED CORE - 2006

CHEM-1 — SAMPLE LOCATION FOR SEDIMENT CHEMISTRY ONLY - 2006



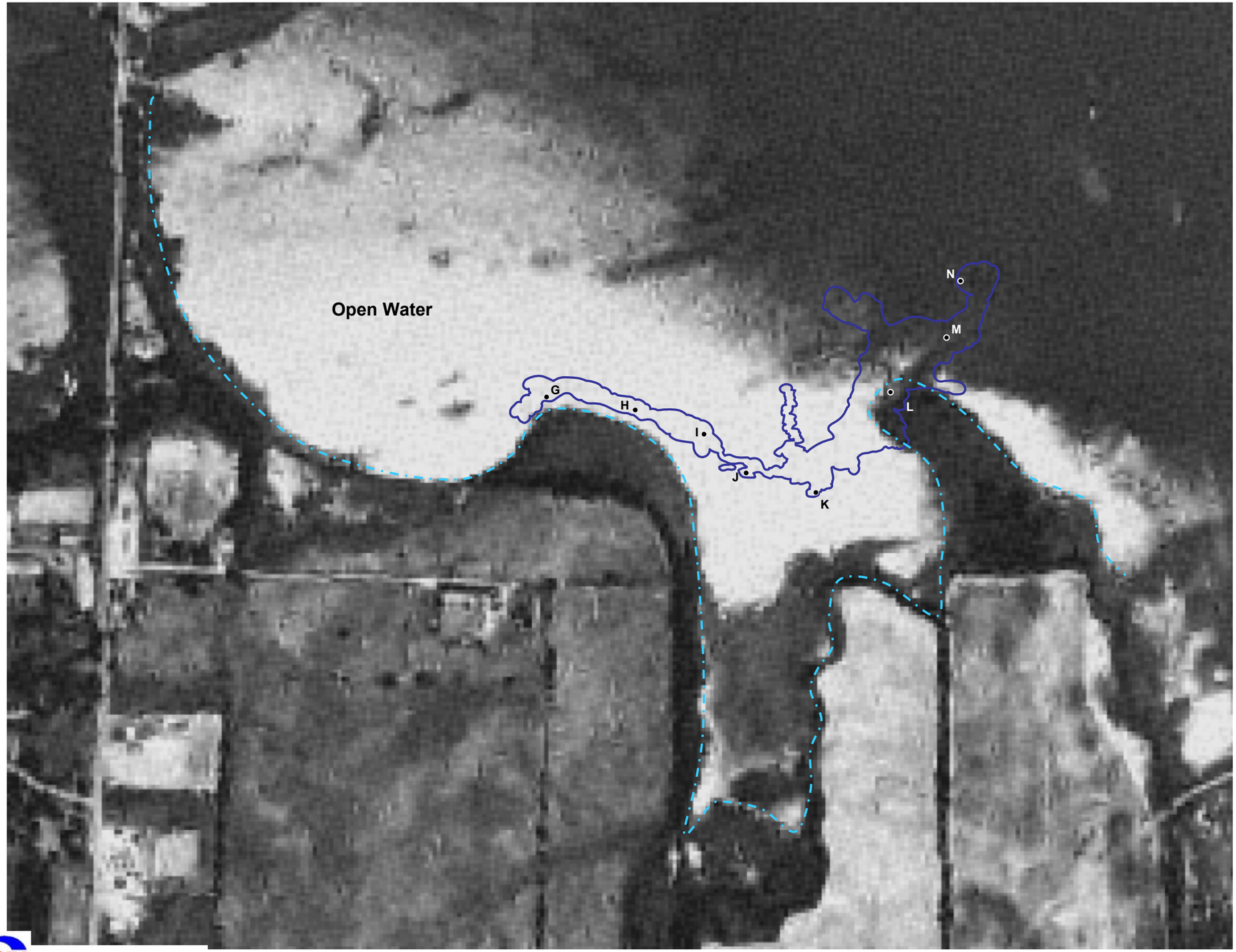
SURVEY: TETRATECH, MARCH 2007,
DELAWARE STATE PLANE,
NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

07462-99912(047)GN-WA092 JUL 21/2008

figure 4.26.2

AOC 8 - TRIBUTARY
2007 AERIAL PHOTOGRAPH AND RELEVANT SAMPLE LOCATIONS
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware



SCALE IN FEET

0 300 600

N

Legend

- Tributary sampling Location (STATIONs)
- 1954 Edge of Open Water
- Edge of Tributary 2002

Glenn Springs Holdings, Inc.

figure 4.26.3

AOC-8 - TRIBUTARY
1954 AERIAL PHOTOGRAPH
CORRECTIVE MEASURES STUDY
OxyChem, Delaware City, Delaware

SCALE IN FEET

0 300 600

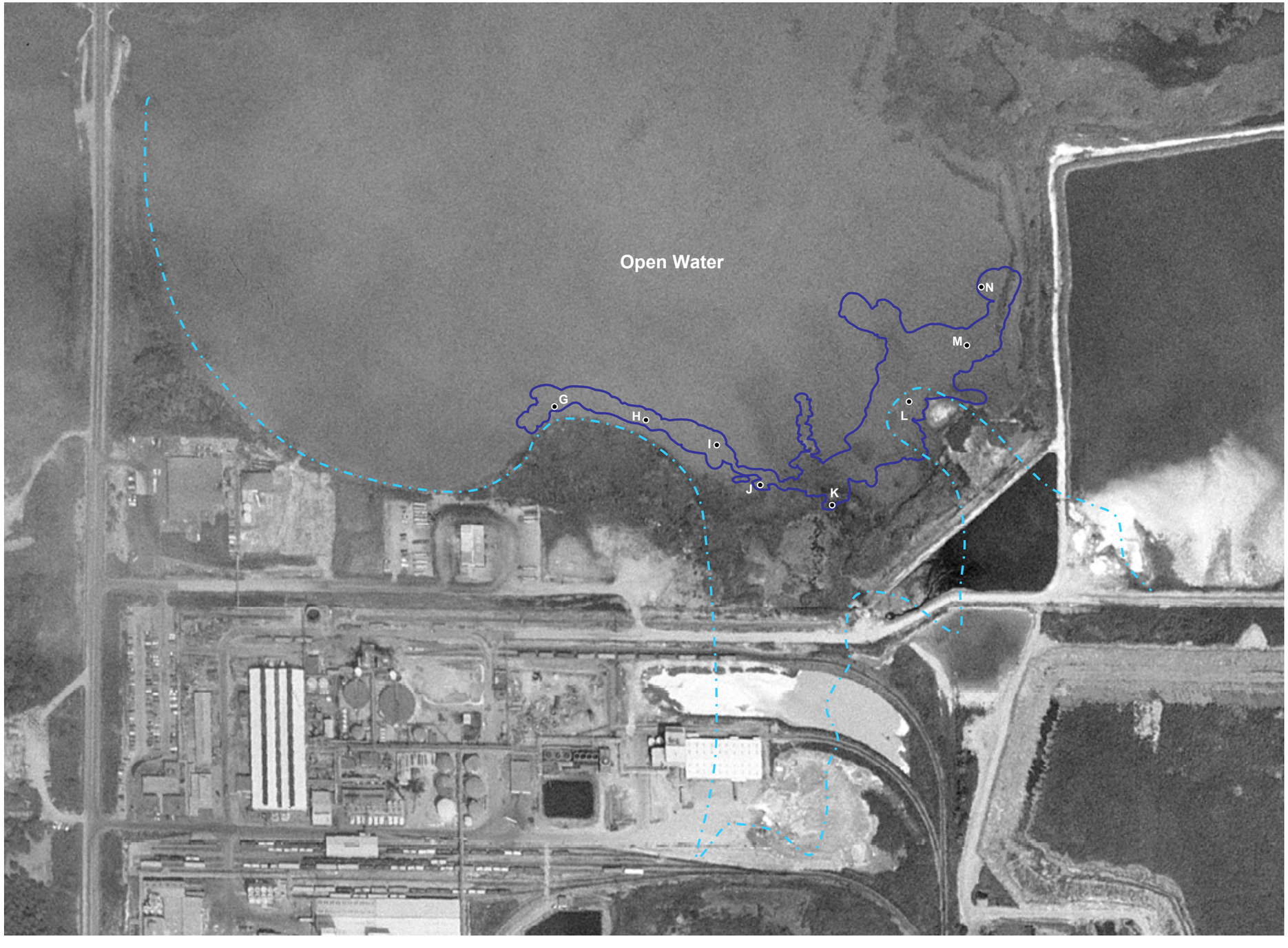
Legend

- Tributary sampling Location (STATIONs)
- 1954 Edge of Open Water
- Edge of Tributary 2002

Glenn Springs Holdings, Inc.

figure 4.26.4

AOC-8 - TRIBUTARY
1962 AERIAL PHOTOGRAPH
CORRECTIVE MEASURES STUDY
OxyChem, Delaware City, Delaware



SCALE IN FEET

0 300 600

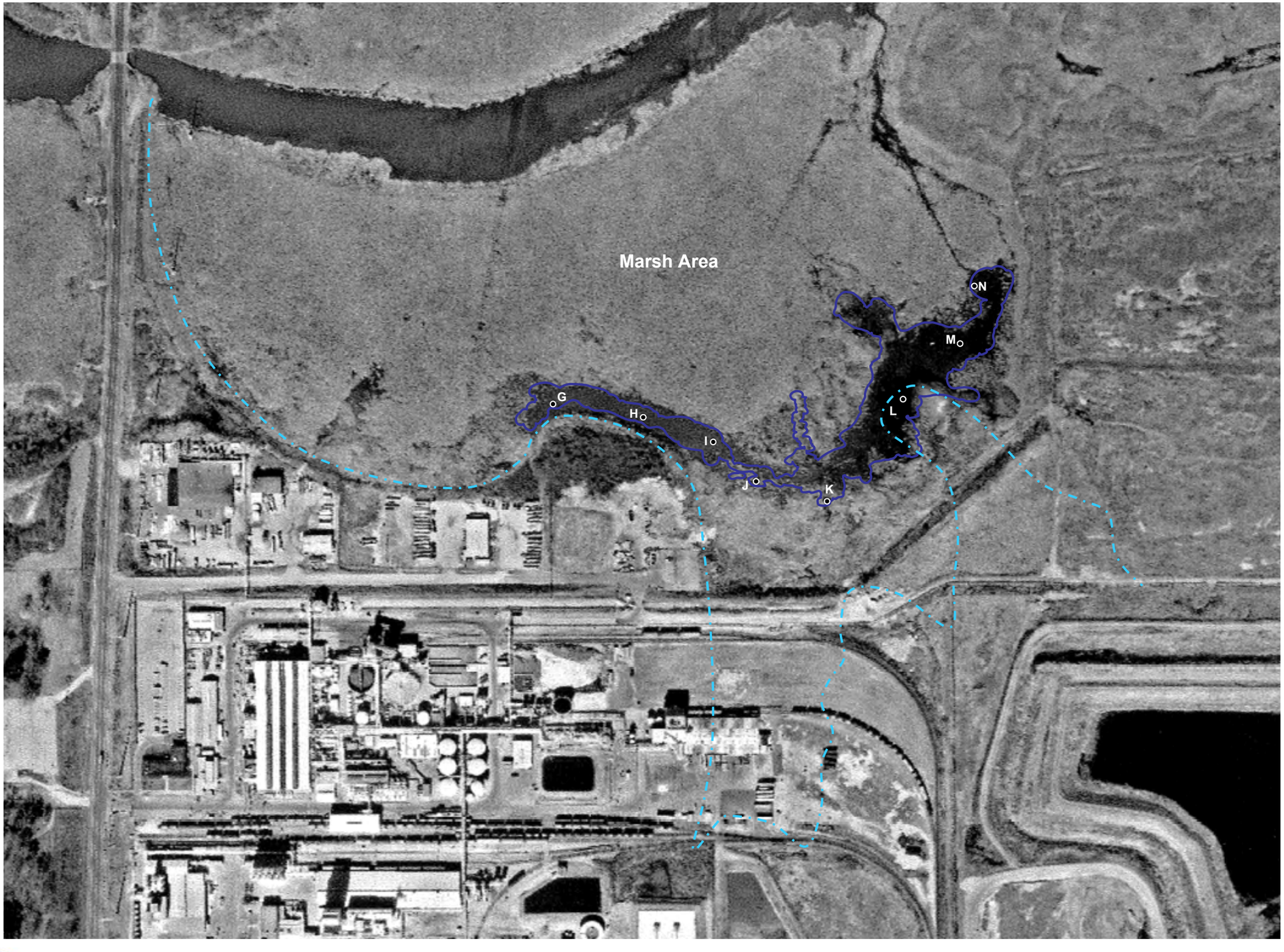
Legend

- Tributary sampling Location (STATIONs)
- 1954 Edge of Open Water
- Edge of Tributary 2002

figure 4.26.5

AOC-8 - TRIBUTARY
1973 AERIAL PHOTOGRAPH
CORRECTIVE MEASURES STUDY
OxyChem, Delaware City, Delaware

Glenn Springs Holdings, Inc.



SCALE IN FEET

0 300 600

Legend

- Tributary sampling Location (STATIONs)
- 1954 Edge of Open Water
- Edge of Tributary 2002

figure 4.26.6

AOC-8 - TRIBUTARY
1990 AERIAL PHOTOGRAPH
CORRECTIVE MEASURES STUDY
OxyChem, Delaware City, Delaware

Glenn Springs Holdings, Inc.

SCALE IN FEET

0 300 600

N

Legend

- Tributary sampling Location (STATIONs)
- 1954 Edge of Open Water
- Edge of Tributary 2002

figure 4.26.7

AOC-8 - TRIBUTARY
2007 AERIAL PHOTOGRAPH
CORRECTIVE MEASURES STUDY
OxyChem, Delaware City, Delaware

Glenn Springs Holdings, Inc.

LEGEND

PROPERTY BOUNDARY

SEDIMENT SAMPLE

MERCURY CONCENTRATIONS (mg/kg)

ND - < 0.15

0.15 - <10

10 - < 100

100 - <1,000

≥ 1,000

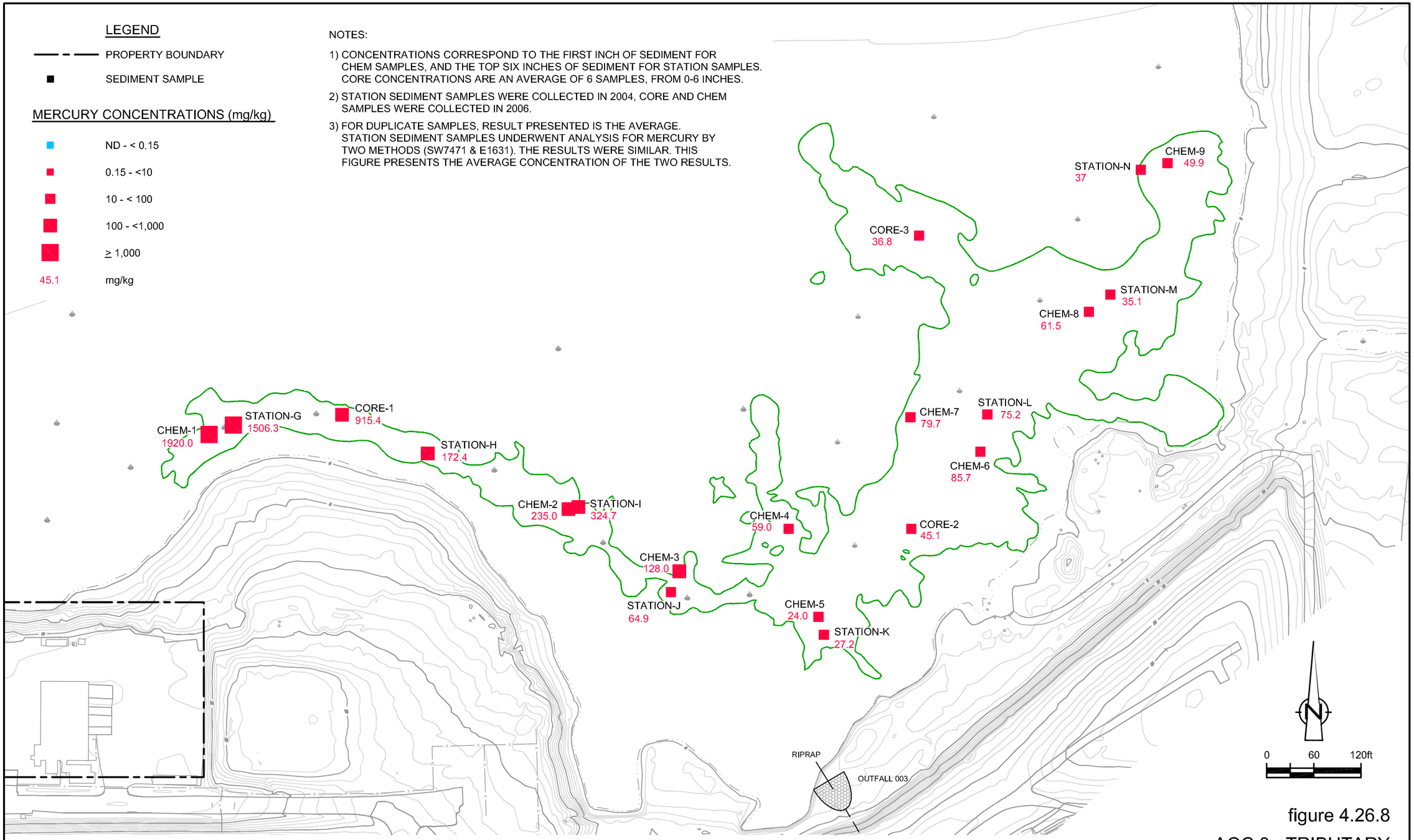
45.1 mg/kg

NOTES:

1) CONCENTRATIONS CORRESPOND TO THE FIRST INCH OF SEDIMENT FOR CHEM SAMPLES, AND THE TOP SIX INCHES OF SEDIMENT FOR STATION SAMPLES. CORE CONCENTRATIONS ARE AN AVERAGE OF 6 SAMPLES, FROM 0-6 INCHES.

2) STATION SEDIMENT SAMPLES WERE COLLECTED IN 2004, CORE AND CHEM SAMPLES WERE COLLECTED IN 2006.

3) FOR DUPLICATE SAMPLES, RESULT PRESENTED IS THE AVERAGE. STATION SEDIMENT SAMPLES UNDERWENT ANALYSIS FOR MERCURY BY TWO METHODS (SW7471 & E1631). THE RESULTS WERE SIMILAR. THIS FIGURE PRESENTS THE AVERAGE CONCENTRATION OF THE TWO RESULTS.



TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007, DELAWARE STATE PLANE, NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

figure 4.26.8

AOC 8 - TRIBUTARY
MERCURY RESULTS FOR SEDIMENT (0-0.5 ft.)
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

07462-99912(047)GN-WA097 JUL 21/2008

LEGEND

PROPERTY BOUNDARY

SEDIMENT SAMPLE

MANGANESE CONCENTRATIONS (mg/kg)

ND - < 460

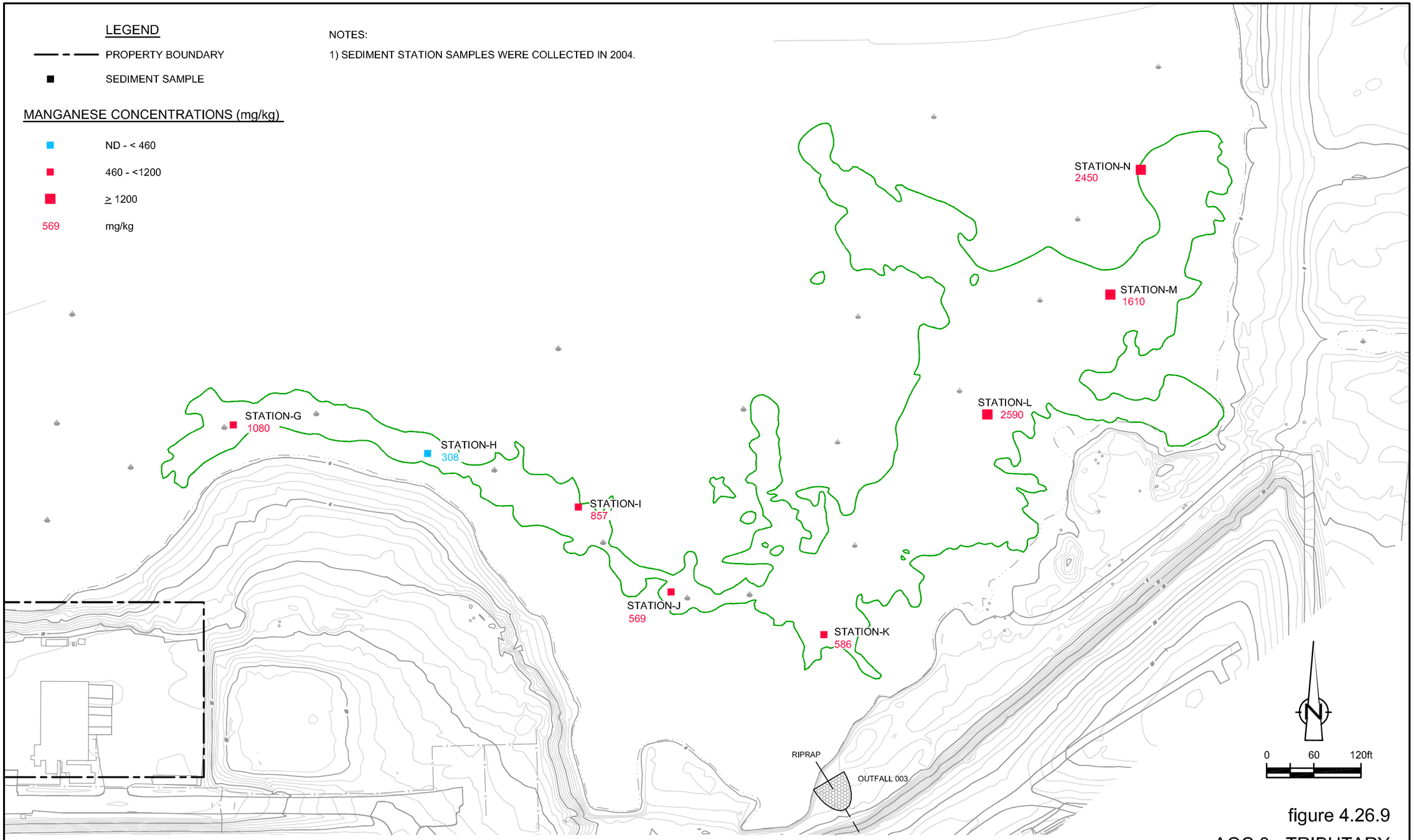
460 - <1200

≥ 1200

569 mg/kg

NOTES:

1) SEDIMENT STATION SAMPLES WERE COLLECTED IN 2004.



TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007,
DELAWARE STATE PLANE,
NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

figure 4.26.9

AOC 8 - TRIBUTARY
MANGANESE RESULTS FOR SEDIMENT (0-0.5 ft.)
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

07462-99912(047)GN-WA115 JUL 21/2008

LEGEND

PROPERTY BOUNDARY

SEDIMENT SAMPLE

TOTAL CHLOROBENZENES CONCENTRATIONS (mg/kg)

ND - < 12

12 - < 33

33 - < 100

≥ 100

537.10 mg/kg

NOTES:

1) CONCENTRATIONS CORRESPOND TO THE FIRST INCH OF SEDIMENT FOR CHEM SAMPLES, AND THE FIRST SIX INCHES FOR STATION SAMPLES.

2) STATION SEDIMENT SAMPLES WERE COLLECTED IN 2004, CHEM SAMPLES WERE COLLECTED IN 2006.

3) TOTAL CHLOROBENZENES IS THE SUM OF 1,2,4-TRICHLOROBENZENE, 1,2-DICHLOROBENZENE, 1,3-DICHLOROBENZENE, 1,4-DICHLOROBENZENE AND CHLOROBENZENE. DOES NOT INCLUDE BENZENE.

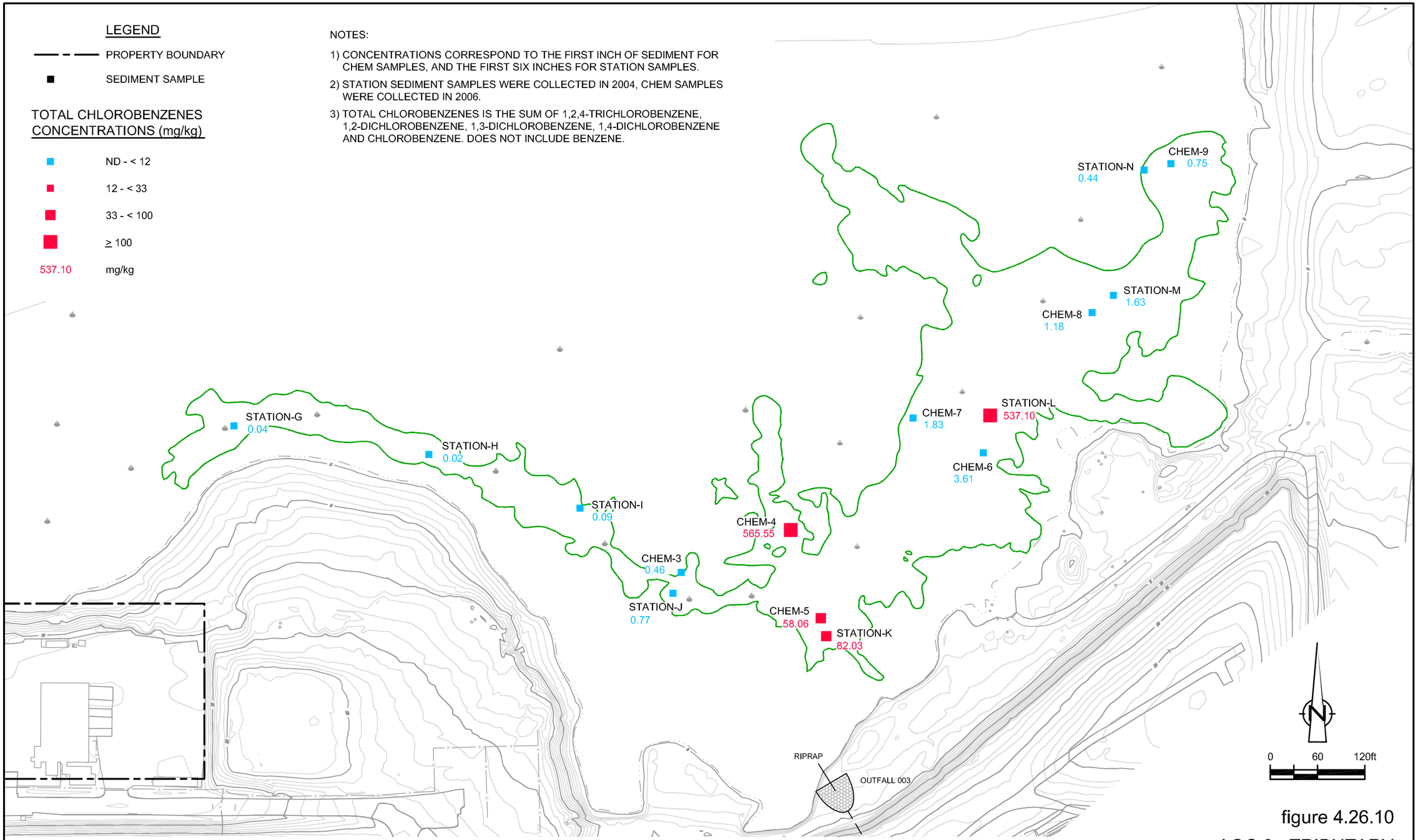


figure 4.26.10

AOC 8 - TRIBUTARY
TOTAL CHLOROBENZENES RESULTS FOR SEDIMENT (0-0.5 ft.)
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007,
DELAWARE STATE PLANE,
NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

07462-99912(047)GN-WA099 JUL 21/2008

LEGEND

PROPERTY BOUNDARY

SURFACE WATER SAMPLE

AVG. DISSOLVED MERCURY CONCENTRATIONS (µg/L)

ND - < 0.77

≥ 0.77

3.4 µg/L

ND NOT DETECTED

NOTES:

1) STATIONS G THROUGH N: AVERAGE OF 6 SAMPLING DATES (MARCH, MAY, AUGUST, NOVEMBER 2007 AND FEBRUARY, MARCH 2008)

2) STATIONS S THROUGH Z: ONE SAMPLING DATE (MARCH 2008)

3) DETECTION LIMIT FOR DISSOLVED MERCURY IN SURFACE WATER IS 0.1 µg/L.

4) DUPLICATES ARE AVERAGED, THEN THE SIX SAMPLES ARE AVERAGED TOGETHER. ND = 1/2 THE DETECTION LIMIT.

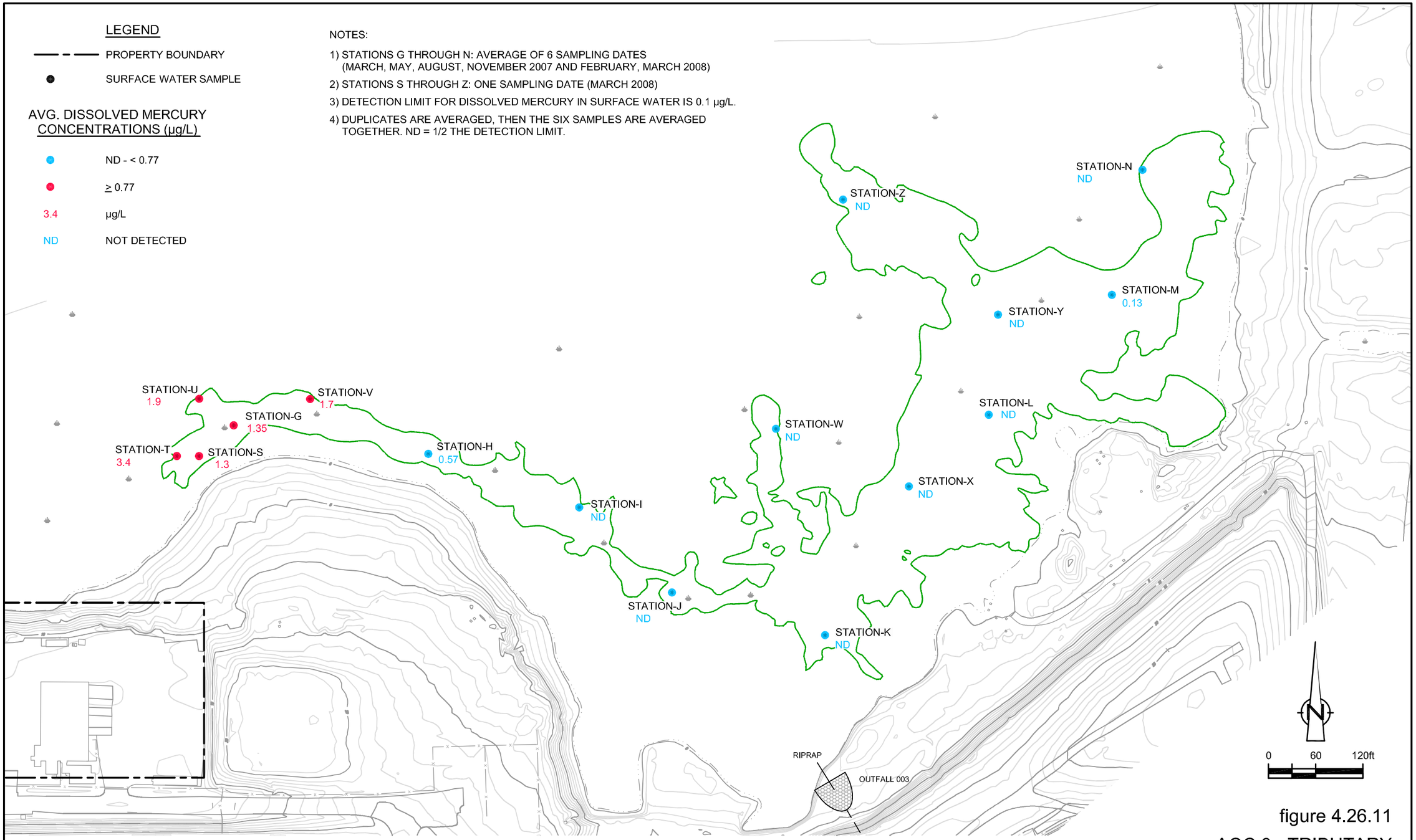


figure 4.26.11

AOC 8 - TRIBUTARY
DISSOLVED MERCURY RESULTS FOR SURFACE WATER
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007, DELAWARE STATE PLANE, NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

07462-99912(047)GN-WA098 JUL 21/2008

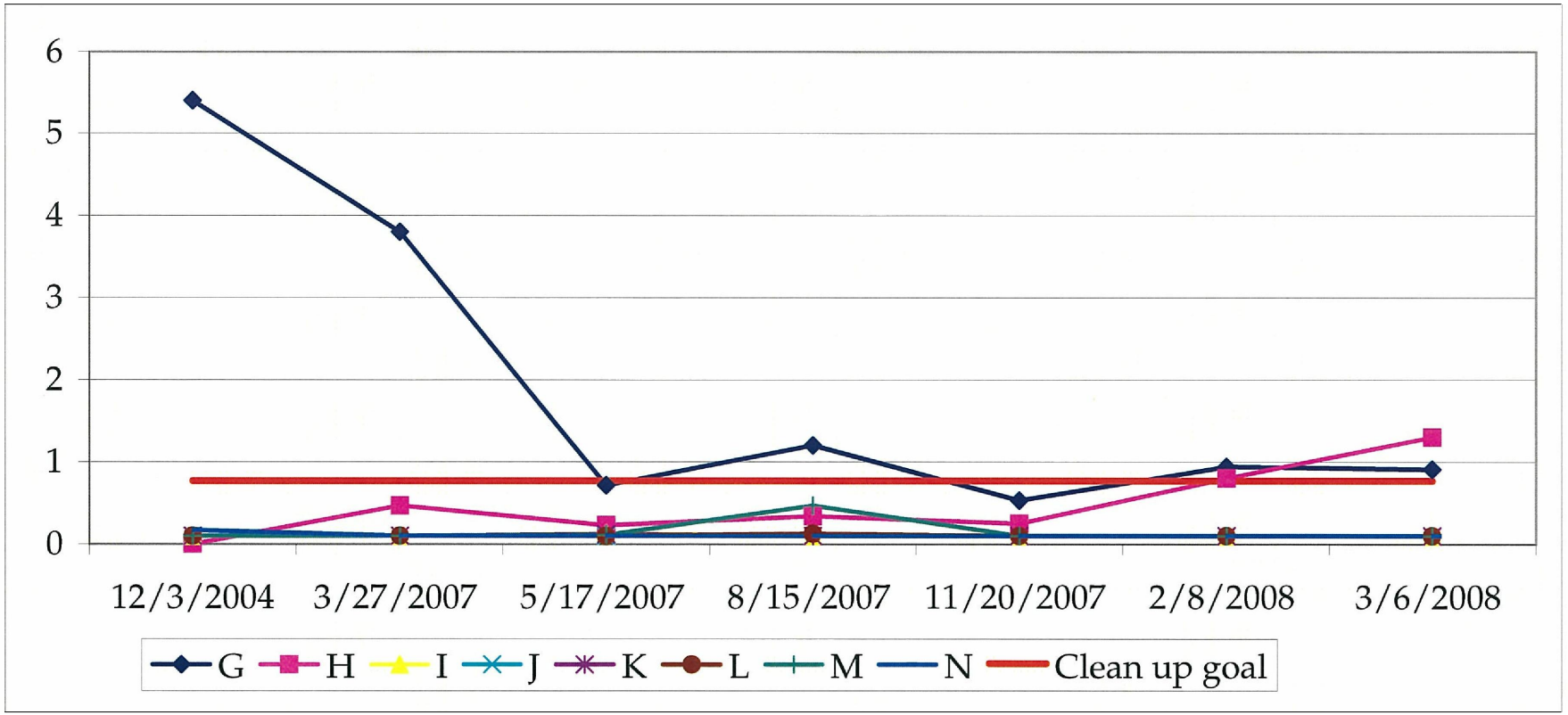


figure 4.26.12

AOC 8 - TRIBUTARY
DISSOLVED MERCURY CONCENTRATIONS (µg/L) IN SURFACE WATER
DECEMBER 2004 - MARCH 2008
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

LEGEND

PROPERTY BOUNDARY

SURFACE WATER SAMPLE

AVG. DISSOLVED MANGANESE CONCENTRATIONS (µg/L)

ND - < 120

120 - < 1300

≥ 1300

833 µg/L

NOTES:

1) STATIONS G THROUGH N: ONE SAMPLING DATE (FEBRUARY 2008).

STATION-G
833

STATION-H
1240

STATION-I
4030

STATION-J
7220

STATION-K
8070

STATION-L
10200

STATION-M
8680

STATION-N
7570

RIPRAP

OUTFALL 003

N

0 60 120ft

TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007,
DELAWARE STATE PLANE,
NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

figure 4.26.13

AOC 8 - TRIBUTARY
DISSOLVED MANGANESE RESULTS FOR SURFACE WATER
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

07462-99912(047)GN-WA116 JUL 21/2008

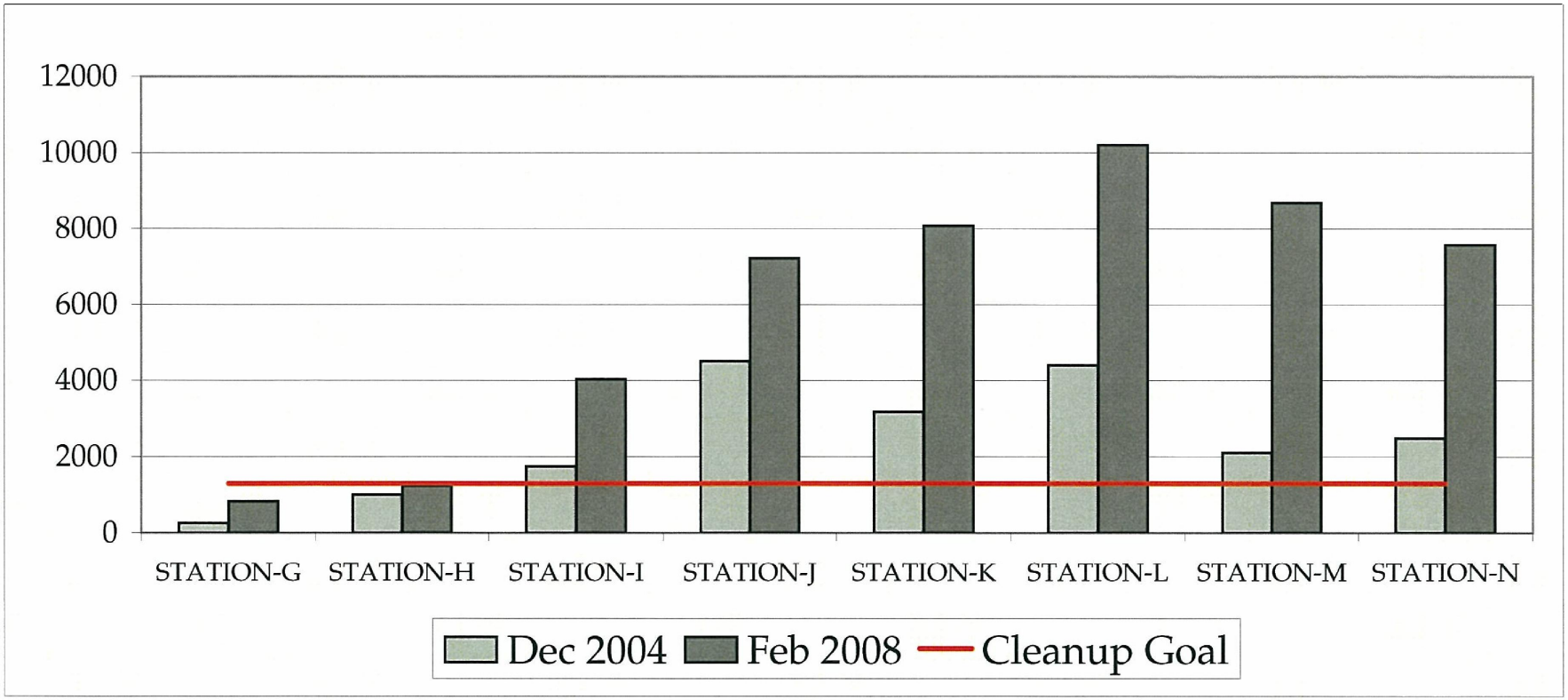


figure 4.26.14

AOC 8 - TRIBUTARY
DISSOLVED MANGANESE CONCENTRATIONS (µg/L) IN SURFACE WATER
DECEMBER 2004 - FEBRUARY 2008
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

Glenn Springs Holdings, Inc.

LEGEND

PROPERTY BOUNDARY

SURFACE WATER SAMPLE

AVG. TOTAL CHLOROBENZENES CONCENTRATIONS (µg/L)

ND - < 196

196 - < 620

≥ 620

8.4 µg/L

NOTES:

1) STATIONS G THROUGH N: AVERAGE OF 6 SAMPLING DATES (MARCH, MAY, AUGUST, NOVEMBER 2007 AND FEBRUARY, MARCH 2008)

2) STATIONS S THROUGH Z: ONE SAMPLING DATE (MARCH 2008)

3) TOTAL CHLOROBENZENES IS THE SUM OF 1,2,4-TRICHLOROBENZENE, 1,2-DICHLOROBENZENE, 1,3-DICHLOROBENZENE, 1,4-DICHLOROBENZENE, AND CHLOROBENZENE. DOES NOT INCLUDE BENZENE.

4) DUPLICATES ARE AVERAGED, THEN THE SIX SAMPLES ARE AVERAGED TOGETHER. ND = 1/2 THE DETECTION LIMIT.

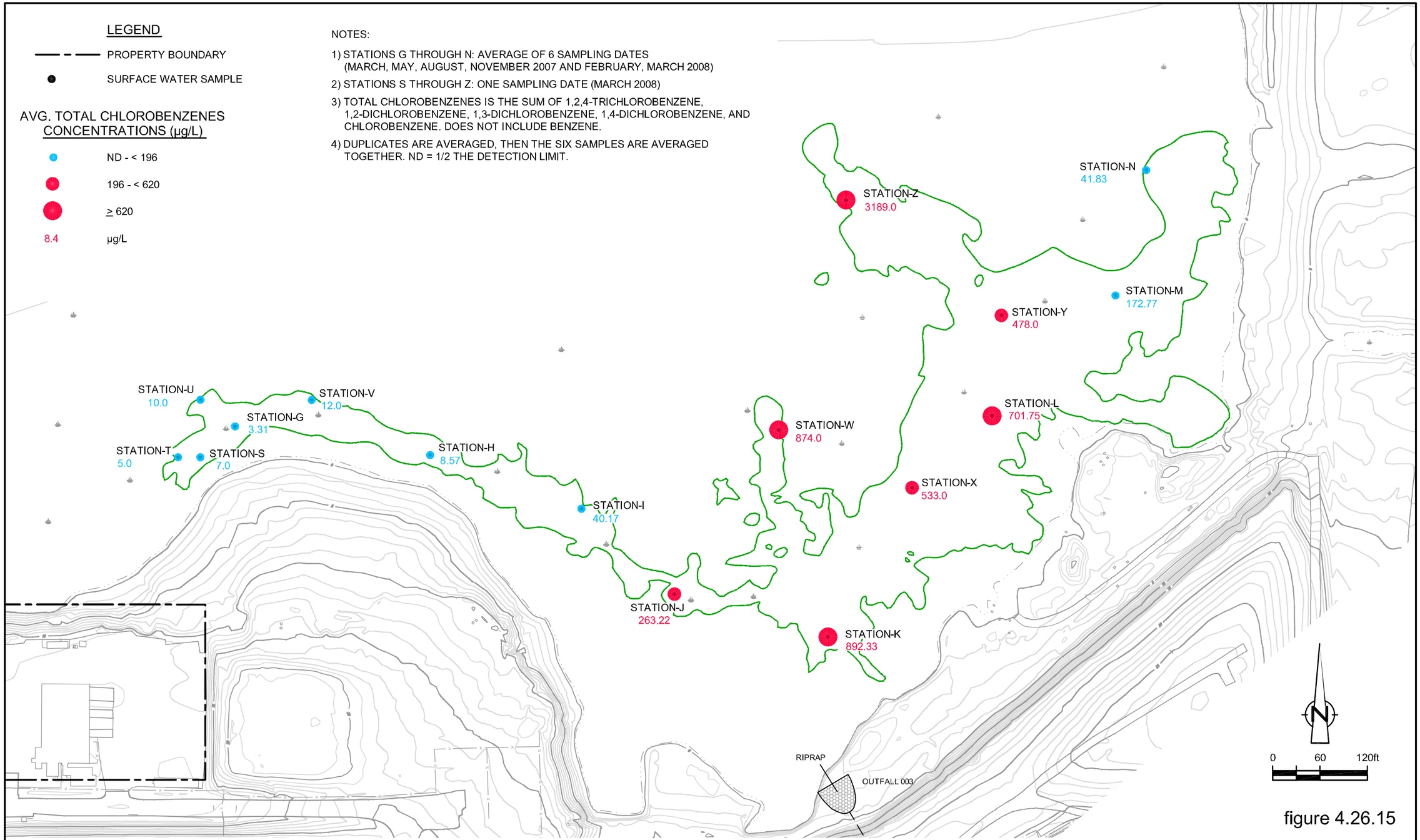


figure 4.26.15

AOC 8 - TRIBUTARY
TOTAL CHLOROBENZENES RESULTS FOR SURFACE WATER
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007, DELAWARE STATE PLANE, NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

07462-99912(047)GN-WA100 JUL 21/2008

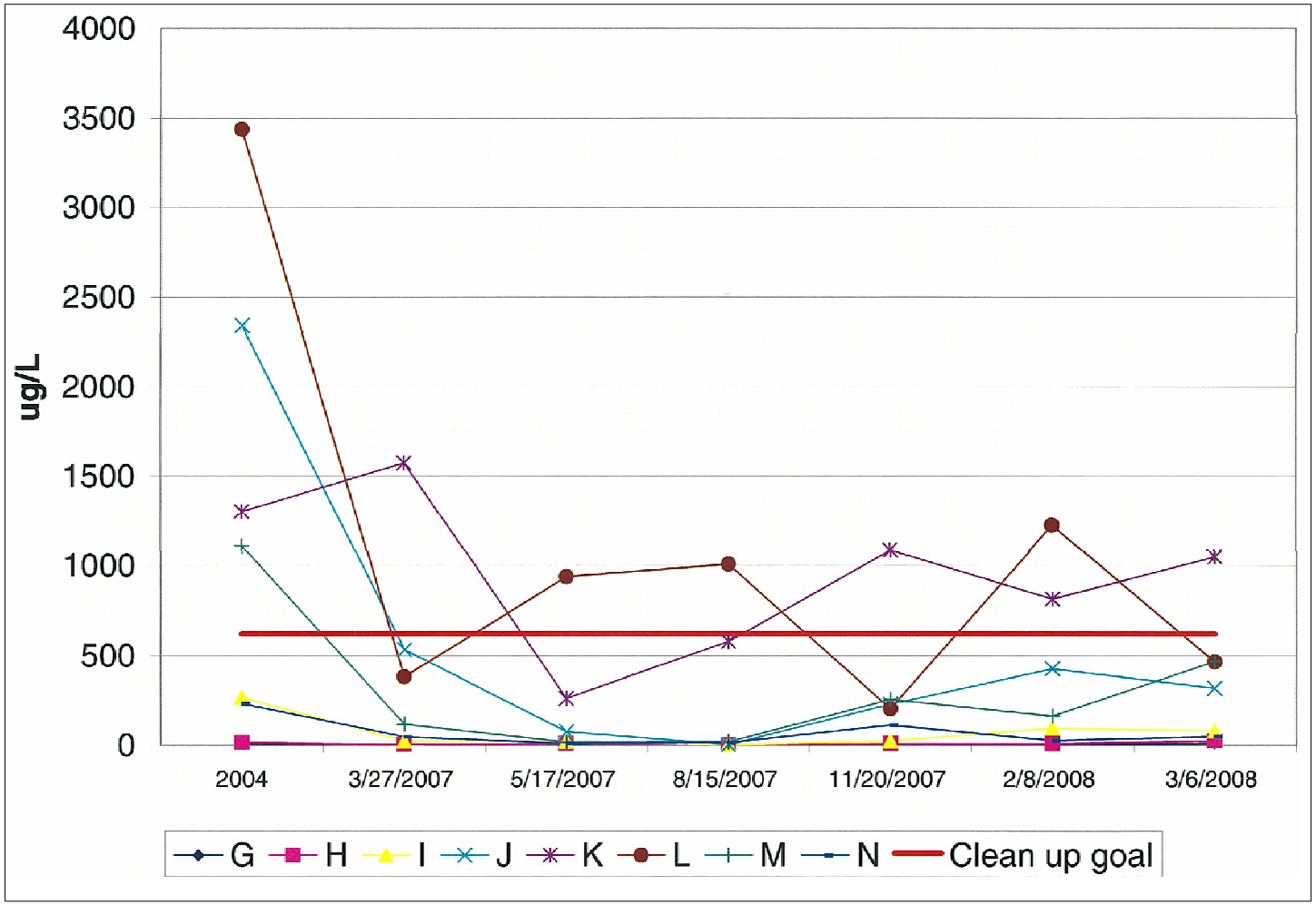
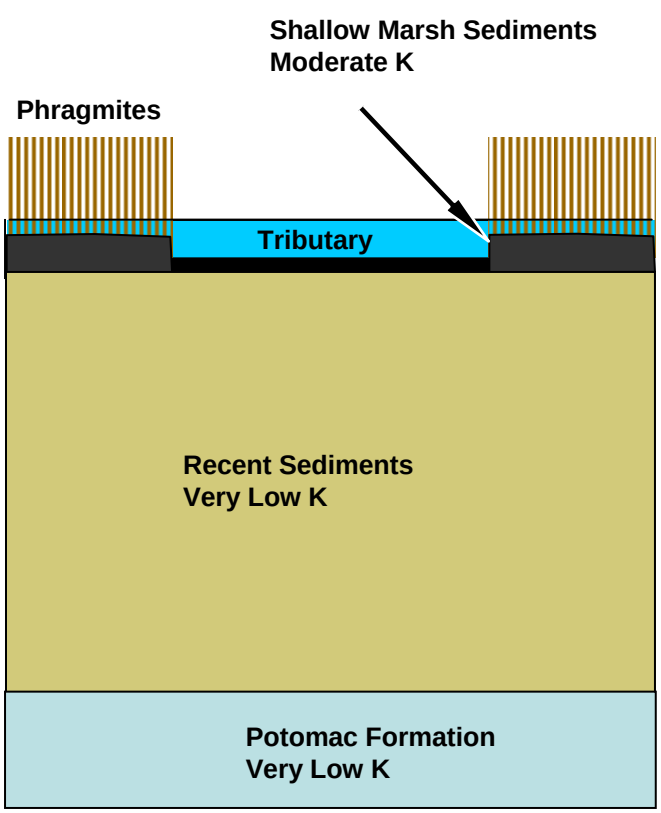


figure 4.26.16

AOC 8 - TRIBUTARY
TOTAL CHLOROBENZENES CONCENTRATIONS (µg/L) IN SURFACE WATER
DECEMBER 2004 - MARCH 2008
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

Glenn Springs Holdings, Inc.

Section A
AOC 8 Near STATION-N
No Groundwater
Discharge to Tributary



Schematic - not to Scale

Section B
AOC 7 Near STATION-L
Groundwater Discharge to Tributary

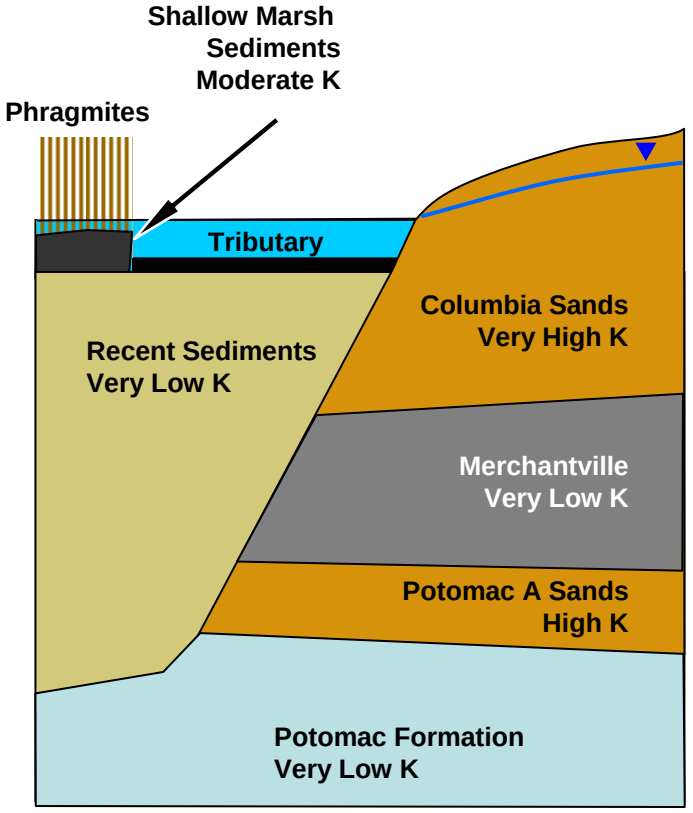
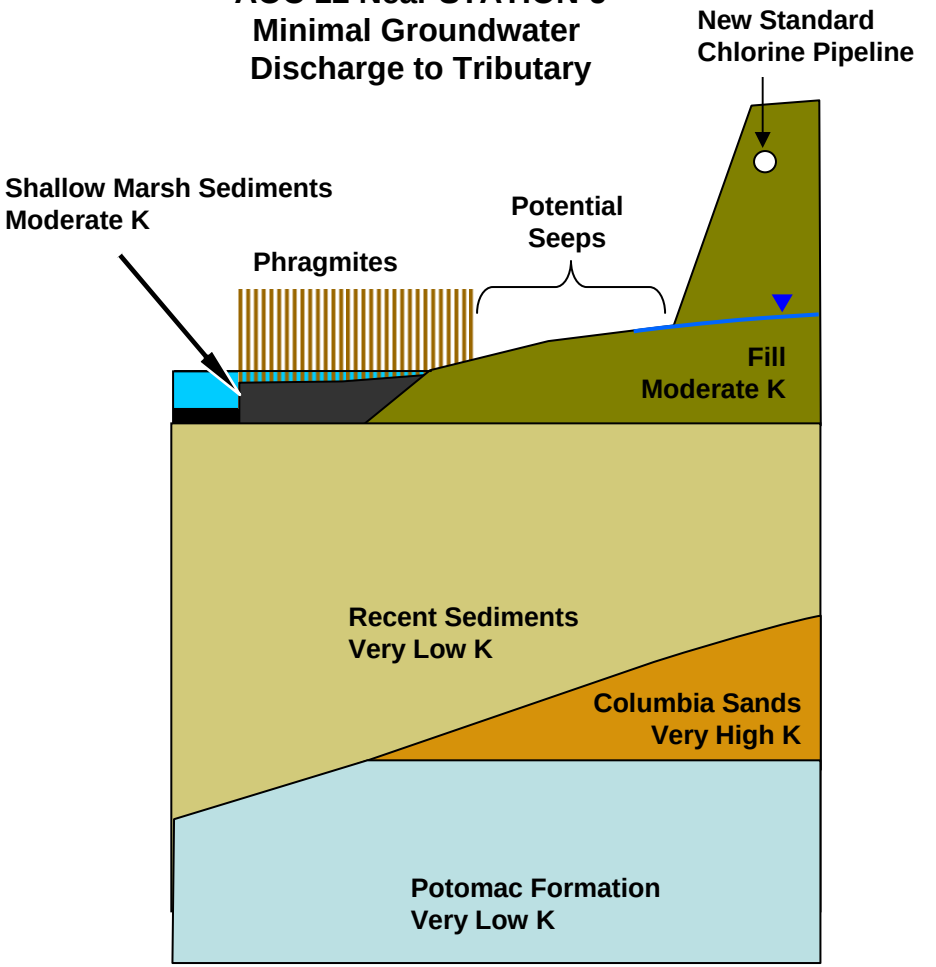


figure 4.26.17

AOC 8 – TRIBUTARY
CONCEPTUAL MODEL SECTIONS A & B
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

Glenn Springs Holdings, Inc.



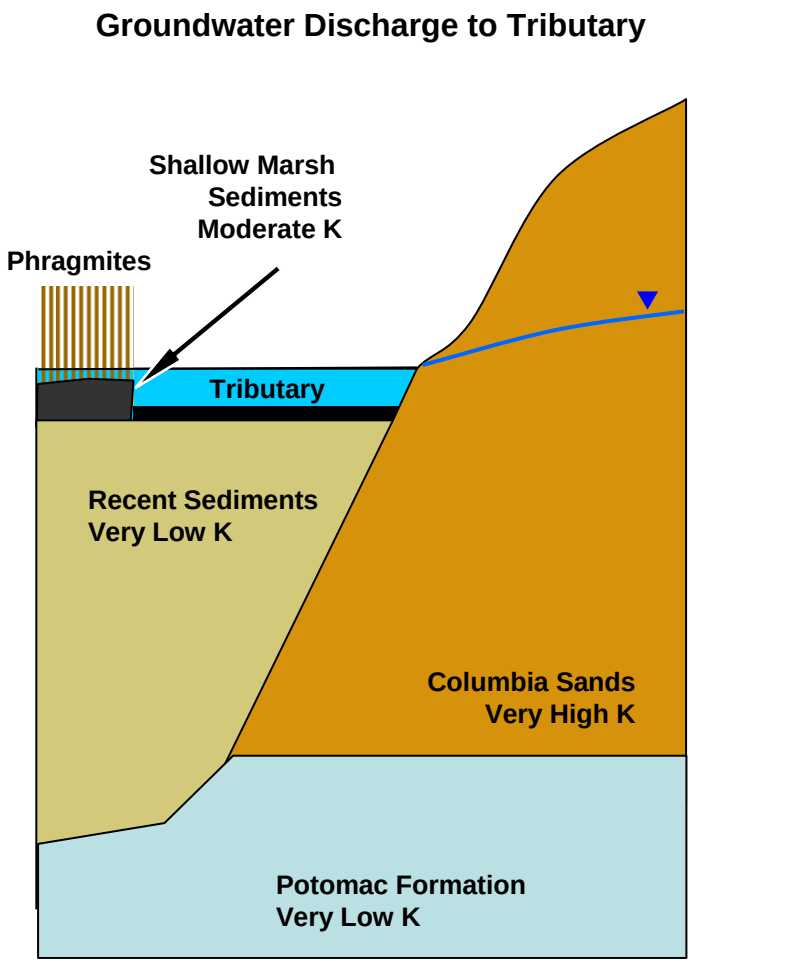


figure 4.26.18

AOC 8 – TRIBUTARY
CONCEPTUAL MODEL SECTIONS C & D
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

- PLACE REACTIVE CAP OVER THE EAST TRIBUTARY (3.17 ACRES)
- PLACE ENHANCED SAND CAP OVER THE WEST TRIBUTARY (0.97 ACRES)

EAST TRIBUTARY
REACTIVE CAP PLACEMENT

WEST TRIBUTARY
ENHANCED SAND CAP PLACEMENT

RIPRAP

OUTFALL 003

N

0 60 120ft

figure 4.26.19

AOC 8 - TRIBUTARY
ALTERNATIVE 2 - ENGINEERED CAPPING
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

AERIAL PHOTO AND TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007,
DELAWARE STATE PLANE,
NAD 27, NGVD 29

OXY Glenn Springs Holdings, Inc.

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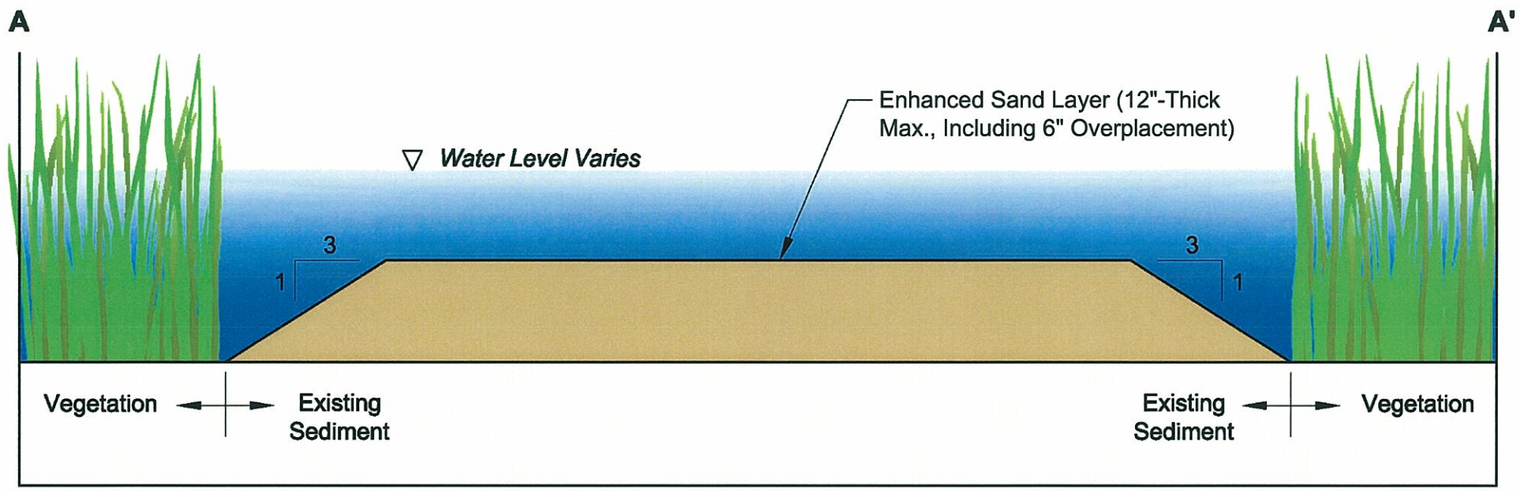
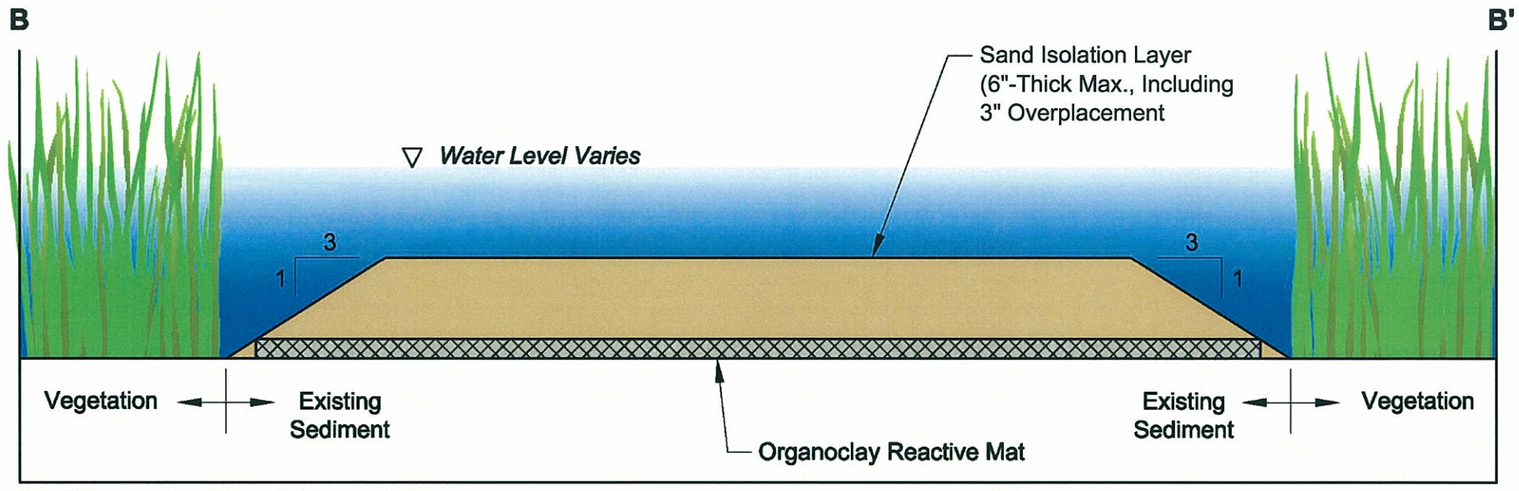


Note: Backfilling will consist of placing a layer of clean sand over the dredged areas, while capping will consist of a sand layer with specified organic carbon content (to enhance retardation properties).

Conceptual Backfilling/Capping Cross Section



Note: Reactive capping may consist of the organoclay reactive mat (as shown), or an amendment may be worked as bulk material mixed in with a sand cap.

Conceptual Reactive Capping Cross Section

Not to Scale

SOURCE: ANCHOR ENVIRONMENTAL, L.L.C.

figure 4.26.20

CONCEPTUAL CAP CROSS-SECTIONS
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

- REMOVE ONE FOOT OF SEDIMENT AND BACKFILL WITH CLEAN SAND OVER THE ENTIRE TRIBUTARY (4.14 ACRES)

TRIBUTARY
DREDGING AND BACKFILLING

RIPRAP

OUTFALL 003

N

0 60 120ft

figure 4.26.21

AOC 8 - TRIBUTARY
ALTERNATIVE 3 - DREDGING AND BACKFILLING
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

SURVEY: TETRATECH, MARCH 2007,
DELAWARE STATE PLANE,
NAD 27, NGVD 29

OXY Glenn Springs Holdings, Inc.

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- PLACE REACTIVE CAP OVER THE EAST TRIBUTARY (3.17 ACRES)
- REMOVE ONE FOOT OF SEDIMENT AND BACKFILL WITH CLEAN SAND OVER THE WEST TRIBUTARY (0.97 ACRES)

EAST TRIBUTARY
REACTIVE CAP PLACEMENT

WEST TRIBUTARY
DREDGING AND BACKFILLING

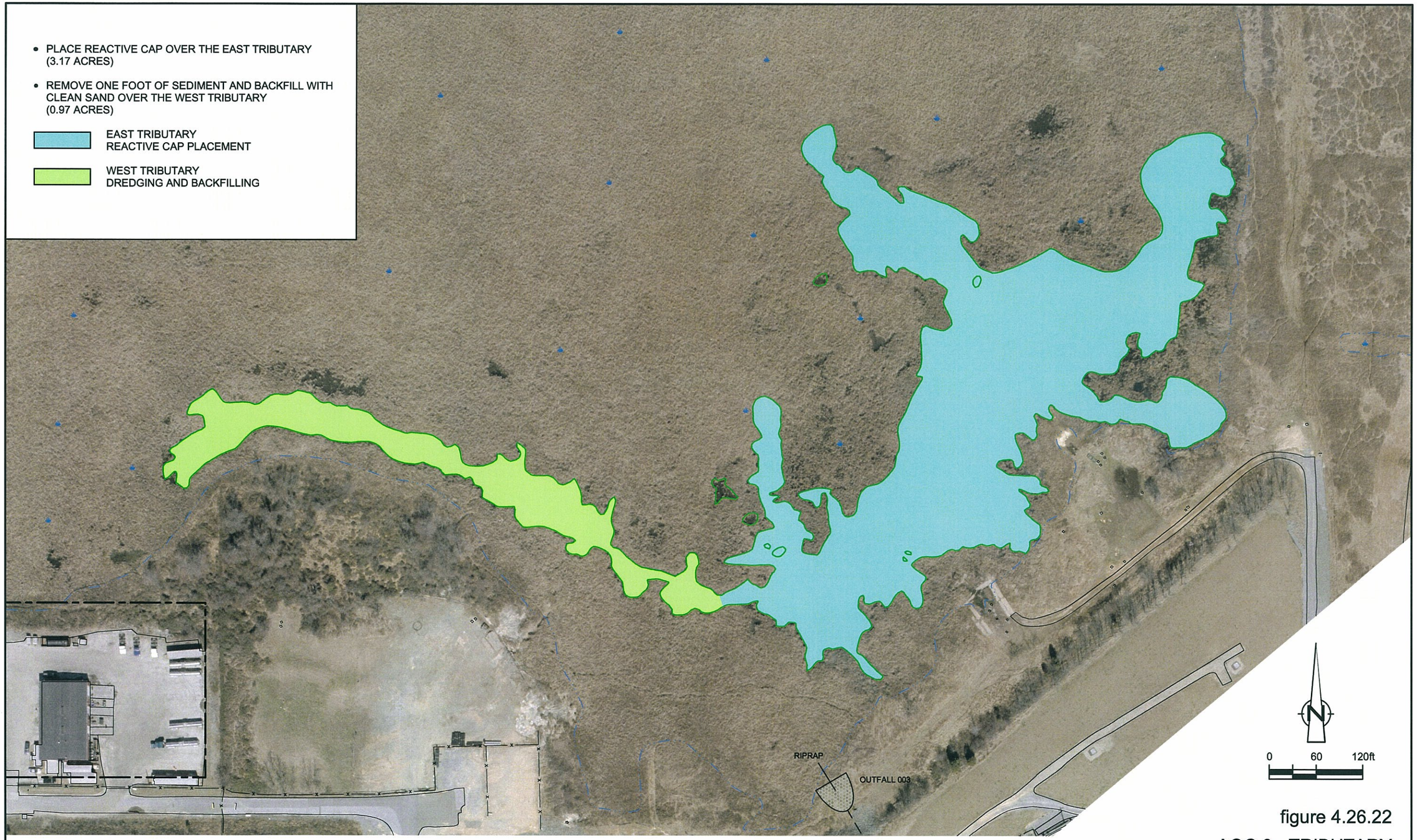

figure 4.26.22

SURVEY: TETRATECH, MARCH 2007,
DELAWARE STATE PLANE,
NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

AOC 8 - TRIBUTARY
ALTERNATIVE 4 - REACTIVE CAPPING (EAST TRIB) AND DREDGING/BACKFILLING (WEST TRIB)
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

07462-99912(047)GN-WA095 JUN 30/2008

- REMOVE ONE FOOT OF SEDIMENT AND PLACE REACTIVE CAP OVER THE EAST TRIBUTARY (3.17 ACRES)
- REMOVE ONE FOOT OF SEDIMENT AND BACKFILL WITH CLEAN SAND OVER THE WEST TRIBUTARY (0.97 ACRES)

EAST TRIBUTARY
DREDGING AND REACTIVE CAP PLACEMENT

WEST TRIBUTARY
DREDGING AND BACKFILLING

RIPRAP

OUTFALL 003

N

0 60 120ft

figure 4.26.23

AERIAL PHOTO AND TOPOGRAPHIC SURVEY: TETRATECH, MARCH 2007, DELAWARE STATE PLANE, NAD 27, NGVD 29

Glenn Springs Holdings, Inc.

AOC 8 - TRIBUTARY
ALTERNATIVE 5 - DREDGING/REACTIVE CAPPING (EAST TRIB) AND DREDGING/BACKFILLING (WEST TRIB)
CORRECTIVE MEASURES STUDY
GSHI, Delaware City, Delaware

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TABLES

TABLE 4.26.1
AOC 8 - TRIBUTARY
SUMMARY OF DOCUMENTATION
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY, DELAWARE

Date	Memo/Report
1986	*Red Lion Creek Subsurface Investigation (Woodward Clyde)*
1989	*Draft Background Data Review Report (ERM)*
1998	*Phase II RCRA Facilities Investigation Report*
June 2001	*Interim Measures Work Plan for Process Area Groundwater* (streambed temperature; CRA Report 11)
May 28, 2004	*Benthic Macroinvertebrate Survey Work Plan – Tributary IMs* (CRA Memo 20)
June 8, 2004	*Summary of Path Forward- Tributary and SD-6 IMs* (CRA Memo 19)
July 1, 2004	*Selection of Reference Stations* (letter to Ruth Prince)
July 8, 2004	*Hydraulic Monitoring Work Plan – Tributary IMs* (CRA Memo 21)
July 12, 2004	*Preliminary Eckman Dredge Results* (letter to Ruth Prince)
September 21, 2004	*Streambed Temperature Study* (results; CRA Memo 24)
October 1, 2004	*Results of Phase I – Tributary and SD-6 IMs* (CRA Memo 25)
October 20, 2004	*Work Plan for Sediment, Water, and Fish Tissue Analysis, Red Lion Creek and Tributary IMs* (CRA Memo 26)
February 2005	*Phase II Surface Water, Sediment and Fish Sampling Results Tributary Interim Measures* (CRA Report 36)
May 26, 2006	*Work Plan to Support Final Remedy Decision- Tributary* (CRA Memo 46)
July 20, 2006	*Assessment of the Critical Body Burden Method for Assessing Risk to Red Lion Creek Fish* (CRA Memo 53)
December 5, 2007	*Estimation of Post-Remediation Goals for Chlorinated Benzenes in Tributary Sediments and Surface Water* (CRA Memo 62)
December 13, 2007	*Proposed Study of Chlorobenzene Variability in Tributary* (CRA Memo 65)
July 2008	*Draft Report: Tributary Investigations 2006-March 2008:Report of Results* (CRA Report 54)

TABLE 4.26.2
AOC 8 - TRIBUTARY
RELEVANT SAMPLE LOCATIONS
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY, DELAWARE

loc_desc	AOC	loc_name	sample_ type_code	start_ depth [ft]	end_ depth [ft]	sample_matrix _code	sample_date	Sediment ESV	Surface Water ESV
Tributary (Area 8)	AOC8	STATION-G	N	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	STATION-H	N	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	STATION-I	N	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	STATION-J	N	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	STATION-K	N	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	STATION-L	N	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	STATION-M	N	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	STATION-M	FD	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	STATION-N	N	0	0.5	Sediment	12/2/2004	Yes	No
Tributary (Area 8)	AOC8	CHEM1	N	0	0.08	Sediment	6/1/2006	Yes	No
Tributary (Area 8)	AOC8	CHEM2	N	0	0.08	Sediment	6/1/2006	Yes	No
Tributary (Area 8)	AOC8	CHEM3	N	0	0.08	Sediment	6/1/2006	Yes	No
Tributary (Area 8)	AOC8	CHEM4	N	0	0.08	Sediment	6/1/2006	Yes	No
Tributary (Area 8)	AOC8	CHEM5	N	0	0.08	Sediment	6/1/2006	Yes	No
Tributary (Area 8)	AOC8	CHEM6	N	0	0.08	Sediment	5/31/2006	Yes	No
Tributary (Area 8)	AOC8	CHEM7	N	0	0.08	Sediment	5/31/2006	Yes	No
Tributary (Area 8)	AOC8	CHEM8	N	0	0.08	Sediment	5/31/2006	Yes	No
Tributary (Area 8)	AOC8	CHEM9	N	0	0.08	Sediment	5/30/2006	Yes	No
Tributary (Area 8)	AOC8	CORE1	N	0	0.08	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE1	N	0.08	0.17	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE1	N	0.17	0.25	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE1	N	0.25	0.33	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE1	N	0.33	0.42	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE1	N	0.42	0.5	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE2	N	0	0.08	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE2	N	0.08	0.17	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE2	N	0.17	0.25	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE2	N	0.25	0.33	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE2	N	0.33	0.42	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE2	N	0.42	0.5	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE3	N	0	0.08	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE3	N	0.08	0.17	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE3	N	0.17	0.25	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE3	N	0.25	0.33	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE3	N	0.33	0.42	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	CORE3	N	0.42	0.5	Sediment	6/19/2006	Yes	No
Tributary (Area 8)	AOC8	STATION-G	N			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-H	N			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-I	N			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-J	N			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-K	N			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-L	N			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-M	FD			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-M	N			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-N	N			Surface Water	12/3/2004	No	Yes
Tributary (Area 8)	AOC8	STATION-G	N			Surface Water	3/27/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-H	N			Surface Water	3/27/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-I	N			Surface Water	3/27/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-J	FD			Surface Water	3/27/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-J	N			Surface Water	3/27/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-K	N			Surface Water	3/27/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-L	N			Surface Water	3/27/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-M	N			Surface Water	3/27/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-N	N			Surface Water	3/27/2007	No	Yes

TABLE 4.26.2
AOC 8 - TRIBUTARY
RELEVANT SAMPLE LOCATIONS
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY, DELAWARE

loc_desc	AOC	loc_name	sample_ type_code	start_ depth [ft]	end_ depth [ft]	sample_matrix _code	sample_date	Sediment ESV	Surface Water ESV
Tributary (Area 8)	AOC8	STATION-G	FD			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-G	N			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-H	N			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-I	N			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-J	N			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-K	N			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-L	N			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-M	N			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-N	N			Surface Water	5/17/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-G	N			Surface Water	8/15/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-H	N			Surface Water	8/15/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-I	N			Surface Water	8/15/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-J	N			Surface Water	8/15/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-K	N			Surface Water	8/15/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-L	N			Surface Water	8/15/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-M	N			Surface Water	8/15/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-N	N			Surface Water	8/15/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-G	N			Surface Water	11/20/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-H	N			Surface Water	11/20/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-I	N			Surface Water	11/20/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-J	N			Surface Water	11/20/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-K	N			Surface Water	11/20/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-L	N			Surface Water	11/20/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-M	N			Surface Water	11/20/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-N	N			Surface Water	11/20/2007	No	Yes
Tributary (Area 8)	AOC8	STATION-G	N			Surface Water	2/8/08	No	Yes
Tributary (Area 8)	AOC8	STATION-H	N			Surface Water	2/8/08	No	Yes
Tributary (Area 8)	AOC8	STATION-I	N			Surface Water	2/8/08	No	Yes
Tributary (Area 8)	AOC8	STATION-J	N			Surface Water	2/8/08	No	Yes
Tributary (Area 8)	AOC8	STATION-K	N			Surface Water	2/8/08	No	Yes
Tributary (Area 8)	AOC8	STATION-L	N			Surface Water	2/8/08	No	Yes
Tributary (Area 8)	AOC8	STATION-M	N			Surface Water	2/8/08	No	Yes
Tributary (Area 8)	AOC8	STATION-N	N			Surface Water	2/8/08	No	Yes
Tributary (Area 8)	AOC8	STATION-G	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-H	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-I	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-J	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-K	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-L	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-M	N			Surface Water	3/7/08	No	Yes
Tributary (Area 8)	AOC8	STATION-N	N			Surface Water	3/7/08	No	Yes
Tributary (Area 8)	AOC8	STATION-S	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-T	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-U	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-V	N			Surface Water	3/6/08	No	Yes
Tributary (Area 8)	AOC8	STATION-W	N			Surface Water	3/7/08	No	Yes
Tributary (Area 8)	AOC8	STATION-X	N			Surface Water	3/7/08	No	Yes
Tributary (Area 8)	AOC8	STATION-Y	N			Surface Water	3/7/08	No	Yes
Tributary (Area 8)	AOC8	STATION-Z	N			Surface Water	3/7/08	No	Yes

N - normal sample
FD - field duplicate
Sediment ESV - EPA Region III Ecological Screening Value (ESV) for Sediment
Surface Water ESV - EPA Region III Ecological Screening Value (ESV) for Surface Water

TABLE 4.26.3
AOC 8 - THRESHOLD SCREENING
FINAL REMEDY PERFORMANCE STANDARDS
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY, DELAWARE

Alternative No.	Corrective Action Alternative	Protect Human Health and the Environment	Achieve Media Cleanup Objectives	Remediate Sources of Releases	Retained for Detailed Evaluation[a]
1	Long-Term Monitoring	No	No	No	Yes
2	Engineered Capping	Met - Exposure Pathway controlled by placement of the reactive cap.	Met - Ecological CAOs would be met by the reactive cap.	Met - Potential source releases controlled.	Yes
3	Dredging and Backfilling	Met - Exposure Pathway controlled by the material removal and backfill placement.	Met - Ecological CAOs would be met by the material removal and backfill placement.	Met - Potential source releases controlled.	Yes
4	Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	Met - Exposure Pathway controlled by the material removal and/or cap placement.	Met - Ecological CAOs would be met by a combination of material removal and cap placement.	Met - Potential source releases controlled.	Yes
5	Dredging and Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	Met - Exposure Pathway controlled by the material removal and placement of the reactive cap and backfill.	Met - Ecological CAOs would be met by a combination of material removal, reactive cap placement and backfill placement.	Met - Potential source releases controlled.	Yes

Note:

a. Alternative 1 was retained for comparative purposes as a baseline option.

TABLE 4.26.4
AOC 8 - THRESHOLD SCREENING
PATHWAY EVALUATION
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY, DELAWARE

Alternative No.	Corrective Action Alternative	Direct Contact	Retained[b]
1	Long-Term Monitoring	No	Yes
2	Engineered Capping	Met - Reactive/Enhanced Sand Cap	Yes
3	Dredging and Backfilling	Met - Removal and Sand Backfill	Yes
4	Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	Met - Reactive Cap/Removal and Sand Backfill	Yes
5	Dredging and Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	Met - Removal and Reactive Cap/Sand Backfill	Yes

Note:

[a.] Direct Contact of Ecological Receptors with surficial sediments (in the biologically active zone 0-2 inches).

TABLE 4.26.5
AOC 8 -DETAILED EVALUATION
BALANCING CRITERIA
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY, DELAWARE

Alternative No.	Corrective Action Alternative	Long-Term Reliability & Effectiveness	Reduction of Toxicity, Mobility & Volume	Short-Term Effectiveness	Implementability	Cost
1	Long-Term Monitoring	n/a	n/a	n/a	n/a	$0.07M
2	Engineered Capping	Reliable and Effective	East and West Trib.- Reduces Toxicity and Mobility- Covers surficial sediments	Effective Immediately	Fully Implementable- Reactive/enhanced sand capping will be accomplished through mechanical placement methods utilizing an excavator operating off swamp mats, or other comparable technologies.	$3.1M
3	Dredging and Backfilling	Reliable and Effective	East and West Trib.- Reduces Volume- Removes surficial sediments Reduces Potential Toxicity and Mobility- Covers residual sediments	Effective Immediately	Fully Implementable- Dredging and backfilling will be accomplished through mechanical removal and placement methods utilizing an excavator operating off swamp mats, or other comparable technologies.	$4.7M
4	Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	Reliable and Effective	East Trib.- Reduces Toxicity and Mobility- Covers surficial sediments West Trib.- Reduces Volume- Removes surficial sediments, and Reduces Potential Toxicity and Mobility- Covers residual sediments	Effective Immediately	Fully Implementable- Reactive capping, dredging, and backfilling will all be accomplished through mechanical removal and placement methods utilizing an excavator operating off swamp mats, or other comparable technologies.	$4.6M
5	Dredging and Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	East Trib.- Dredging would potentially expose deeper sediments with higher chlorobenzene concentrations. West Trib.- Reliable and Effective	East and West Trib.- Reduces Volume- Removes surficial sediments, and Reduces Potential Toxicity and Mobility- Covers residual sediments	East Trib.- Dredging would potentially expose deeper sediments with higher chlorobenzene concentrations. West Trib.- Effective Immediately	Fully Implementable- Dredging and reactive capping will be accomplished through mechanical removal and placement methods utilizing an excavator operating off swamp mats, or other comparable technologies.	$5.8M

Note:

n/a = not applicable.

TABLE 4.26.6
AOC 8 - DETAILED EVALUATION
RANKING OF ALTERNATIVES
GLENN SPRINGS HOLDINGS, INC.
DELWARE CITY, DELAWARE

Alternative No.	Corrective Action Alternative	Score	Long-Term Reliability & Effectiveness	Reduction of Toxicity, Mobility & Volume	Short-Term Effectiveness	Implementability	Cost - Present Value
n/a	Rank Weight	n/a	3	2	2	2	1
1	Long-Term Monitoring	5	0	0	0	0	5
2	Engineered Capping	36	4	2	4	4	4
3	Dredging and Backfilling	35	4	4	3	3	3
4	Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	37	4	3	4	4	3
5	Dredging and Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	34	4	4	3	3	2

Notes:

1. Ranked weight was determined based on relative importance of evaluation criteria. (1 = low; 3 = high).
2. Ranking criteria: 1 = low; 5 = high.

APPENDIX A

AOC 8- SEDIMENT & SURFACE WATER SCREENING RESULTS

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
STATS SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:									*CHEM 1*
Sample ID:									*SED-7462-060106-CJP-032*
Sample Date:									*6/1/2006*
Sample Depth:									*(0-0.08) ft bgs*
			Number of	*Number of Detects*	*Maximum*	*Max Detected*	*Sample Date of*	*Number of Times*	
Parameters	*Units*	*Sediment ESV*	*Samples*	*Above Criteria*	*Detected*	*Location*	*Max Detected*	*Above Standard*	
Volatile Organic Compounds									
1,2-Dichlorobenzene	ug/kg	330	16	3	83000	STATION-L	12/2/2004	251.52	-
1,3-Dichlorobenzene	ug/kg	1700	16	2	26000 D	CHEM 4	6/1/2006	15.29	-
1,4-Dichlorobenzene	ug/kg	340	16	8	320000 D	CHEM 4	6/1/2006	941.18	-
Acetone	ug/kg	8.7	9	9	130 J	STATION-G	12/2/2004	14.94	-
Benzene	ug/kg	160	9	1	7600	STATION-L	12/2/2004	47.50	-
Carbon disulfide	ug/kg	0.85	9	9	31	STATION-N	12/2/2004	36.47	-
Chlorobenzene	ug/kg	410	16	8	160000	STATION-L	12/2/2004	390.24	-
Semi-volatile Organic Compounds									
2-Methylnaphthalene	ug/kg	70	9	3	1000 J	STATION-M	12/2/2004	14.29	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	9	7	700 J	STATION-K	12/2/2004	3.85	-
Naphthalene	ug/kg	176	9	5	1000 J	STATION-G	12/2/2004	5.68	-
Pyrene	ug/kg	195	9	1	600 J	STATION-M	12/2/2004	3.08	-
Metals									
Arsenic	mg/kg	8.2	9	9	31.6	STATION-G	12/2/2004	3.85	-
Cadmium	mg/kg	1.2	9	7	5	STATION-K	12/2/2004	4.17	-
Chromium Total	mg/kg	26	9	9	253 J	STATION-G	12/2/2004	9.73	-
Cobalt	mg/kg	50	9	3	58.1 J	STATION-K	12/2/2004	1.16	-
Copper	mg/kg	34	9	4	43.2	STATION-N	12/2/2004	1.27	-
Iron	mg/kg	20000	9	6	32500 J	STATION-N	12/2/2004	1.63	-
Lead	mg/kg	46.7	9	2	95.1 J	STATION-H	12/2/2004	2.04	-
Manganese	mg/kg	460	9	8	2590 J	STATION-L	12/2/2004	5.63	-
Mercury~E1631	mg/kg	0.15	9	9	1382.53	STATION-G	12/2/2004	9216.87	-
Mercury~SW7471	mg/kg	0.15	36	35	1920 B	CHEM 1	6/1/2006	12800.00	**1920 B**
Nickel	mg/kg	20.9	9	8	51.0 J	STATION-M	12/2/2004	2.44	-
Selenium	mg/kg	1	9	8	4.3 L	STATION-I	12/2/2004	4.30	-
Silver	mg/kg	1	9	1	1.4	STATION-G	12/2/2004	1.40	-
Vanadium	mg/kg	57	9	2	109	STATION-I	12/2/2004	1.91	-
Zinc	mg/kg	150	9	8	517 J	STATION-M	12/2/2004	3.45	-
Notes:									
B - Not detected substantially above the level reported in laboratory or field blanks.									
D - Compounds at secondary dilution factor.									
J - Estimated concentration.									
L - Low bias.									
N* - Sample recovery not within conrol limits.									
U - Not present at or above the associated value.									
UL - Not present at or above the associated value. Low bias.									
- Not analyzed.									

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
STATS SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 2*	*CHEM 3*	*CHEM 4*	*CHEM 5*	*CHEM 6*
Sample ID:			*SED-7462-060106-CJP-035*	*SED-7462-060106-CJP-023*	*SED-7462-060106-CJP-027*	*SED-7462-060106-CJP-039*	*SED-7462-053106-CJP-015*
Sample Date:			*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*	*5/31/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,2-Dichlorobenzene	ug/kg	330	-	48	**69000 D**	160	290
1,3-Dichlorobenzene	ug/kg	1700	-	81	**26000 D**	880	370
1,4-Dichlorobenzene	ug/kg	340	-	210	**320000 D**	**29000 D**	**1300**
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Chlorobenzene	ug/kg	410	-	97	**150000 D**	**28000 D**	**1600**
Semi-volatile Organic Compounds							
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Arsenic	mg/kg	8.2	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**235**	**128**	**59.0**	**24.0 B**	**85.7 N***
Nickel	mg/kg	20.9	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
STATS SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 7*	*CHEM 8*	*CHEM 9*	*CORE 1*	*CORE 1*
Sample ID:			*SED-7462-053106-CJP-019*	*SED-7462-053106-CJP-011*	*SED-7462-053006-CJP-001*	*SED-7462-061906-CJP-044*	*SED-7462-061906-CJP-045*
Sample Date:			*5/31/2006*	*5/31/2006*	*5/30/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,2-Dichlorobenzene	ug/kg	330	250	130	130	-	-
1,3-Dichlorobenzene	ug/kg	1700	410	260	150	-	-
1,4-Dichlorobenzene	ug/kg	340	750	500	290	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Chlorobenzene	ug/kg	410	350	250	150	-	-
Semi-volatile Organic Compounds							
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Arsenic	mg/kg	8.2	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	79.7 N*	61.5 N*	49.9 N*	1430	1220
Nickel	mg/kg	20.9	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
STATS SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*	*CORE 2*
Sample ID:			*SED-7462-061906-CJP-046*	*SED-7462-061906-CJP-047*	*SED-7462-061906-CJP-048*	*SED-7462-061906-CJP-049*	*SED-7462-061906-CJP-057*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,2-Dichlorobenzene	ug/kg	330	-	-	-	-	-
1,3-Dichlorobenzene	ug/kg	1700	-	-	-	-	-
1,4-Dichlorobenzene	ug/kg	340	-	-	-	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Chlorobenzene	ug/kg	410	-	-	-	-	-
Semi-volatile Organic Compounds							
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Arsenic	mg/kg	8.2	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**1290**	**1090**	**412**	**50.4**	**79.8**
Nickel	mg/kg	20.9	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
STATS SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*
Sample ID:			*SED-7462-061906-CJP-058*	*SED-7462-061906-CJP-059*	*SED-7462-061906-CJP-060*	*SED-7462-061906-CJP-061*	*SED-7462-061906-CJP-062*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,2-Dichlorobenzene	ug/kg	330	-	-	-	-	-
1,3-Dichlorobenzene	ug/kg	1700	-	-	-	-	-
1,4-Dichlorobenzene	ug/kg	340	-	-	-	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Chlorobenzene	ug/kg	410	-	-	-	-	-
Semi-volatile Organic Compounds							
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Arsenic	mg/kg	8.2	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**79.2**	**4.9**	**70.2**	**21.4**	**15.2**
Nickel	mg/kg	20.9	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
STATS SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 3*	*CORE 3*	*CORE 3*	*CORE 3*	*CORE 3*
Sample ID:			*SED-7462-061906-CJP-069*	*SED-7462-061906-CJP-070*	*SED-7462-061906-CJP-071*	*SED-7462-061906-CJP-072*	*SED-7462-061906-CJP-073*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,2-Dichlorobenzene	ug/kg	330	-	-	-	-	-
1,3-Dichlorobenzene	ug/kg	1700	-	-	-	-	-
1,4-Dichlorobenzene	ug/kg	340	-	-	-	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Chlorobenzene	ug/kg	410	-	-	-	-	-
Semi-volatile Organic Compounds							
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Arsenic	mg/kg	8.2	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**49.8**	**48.1**	**40.5**	**38.0**	**20.8**
Nickel	mg/kg	20.9	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
STATS SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 3*	*STATION-G*	*STATION-H*	*STATION-I*	*STATION-J*
Sample ID:			*SED-7462-061906-CJP-074*	*SD-7462-120204-DJT-019*	*SD-7462-120204-DJT-020*	*SD-7462-120204-DJT-021*	*SD-7462-120204-DJT-022*
Sample Date:			*6/19/2006*	*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0.42-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,2-Dichlorobenzene	ug/kg	330	-	6 J	3 J	15	10 J
1,3-Dichlorobenzene	ug/kg	1700	-	6 J	5 U	15 U	46
1,4-Dichlorobenzene	ug/kg	340	-	14	8.5	32	160
Acetone	ug/kg	8.7	-	**130 J**	**34 J**	**86 J**	**100 J**
Benzene	ug/kg	160	-	4 U	2 U	5 U	5 U
Carbon disulfide	ug/kg	0.85	-	**16**	**5.4**	**17**	**10 J**
Chlorobenzene	ug/kg	410	-	13	6.1	32	**550**
Semi-volatile Organic Compounds							
2-Methylnaphthalene	ug/kg	70	-	**900 J**	730 U	1400 U	1500 U
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	1500 U	**200 J**	**300 J**	**400 J**
Naphthalene	ug/kg	176	-	**1000 J**	**200 J**	1400 U	1500 U
Pyrene	ug/kg	195	-	1500 U	730 U	1400 U	1500 U
Metals							
Arsenic	mg/kg	8.2	-	**31.6**	**15.6**	**29.2**	**10.8**
Cadmium	mg/kg	1.2	-	1.2	1.1	**2.2**	**2.5**
Chromium Total	mg/kg	26	-	**253 J**	**103 J**	**146 J**	**67.2 J**
Cobalt	mg/kg	50	-	10.7	10.4 J	22.4 J	27.3 J
Copper	mg/kg	34	-	14.9	28.1	25.8	**38.2**
Iron	mg/kg	20000	-	16000 J	17300 J	**22100 J**	**22800 J**
Lead	mg/kg	46.7	-	28.6 J	**95.1 J**	38.2 J	40.8 J
Manganese	mg/kg	460	-	**1080 J**	308 J	**857 J**	**569 J**
Mercury~E1631	mg/kg	0.15	-	**1382.53**	**226.782**	**336.364**	**44.615**
Mercury~SW7471	mg/kg	0.15	**23.7**	**1630**	**118**	**313**	**85.2**
Nickel	mg/kg	20.9	-	20.6	**21.6 J**	**38.0 J**	**37.7 J**
Selenium	mg/kg	1	-	**3.6 J**	**1.3 J**	**4.3 L**	**2.7 L**
Silver	mg/kg	1	-	**1.4**	0.17 U	0.31 U	0.34 U
Vanadium	mg/kg	57	-	50.0 J	46.6	**109**	56.4
Zinc	mg/kg	150	-	141 J	**167 J**	**225 J**	**347 J**
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
STATS SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-K*	*STATION-L*	*STATION-M*	*STATION-M*	*STATION-N*
Sample ID:			*SD-7462-120204-DJT-017*	*SD-7462-120204-DJT-014*	*SD-7462-120204-DJT-015*	*SD-7462-120204-DJT-018*	*SD-7462-120204-DJT-013*
Sample Date:			*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
						(Duplicate)	
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,2-Dichlorobenzene	ug/kg	330	**560**	**83000**	160	75	47
1,3-Dichlorobenzene	ug/kg	1700	430	**24000**	120	100	45
1,4-Dichlorobenzene	ug/kg	340	**30000**	**270000**	**530**	340	130
Acetone	ug/kg	8.7	**59 J**	**84 J**	**100 J**	**120 J**	**100 J**
Benzene	ug/kg	160	50	**7600**	62	26	34
Carbon disulfide	ug/kg	0.85	**25**	**18**	**29**	**29**	**31**
Chlorobenzene	ug/kg	410	**51000**	**160000**	**1100**	**820**	210
Semi-volatile Organic Compounds							
2-Methylnaphthalene	ug/kg	70	**400 J**	920 U	1900 U	**1000 J**	1700 U
bis(2-Ethylhexyl)phthalate	ug/kg	182	**700 J**	**400 J**	**400 J**	**400 J**	1700 U
Naphthalene	ug/kg	176	**500 J**	920 U	1900 U	**900 J**	**600 J**
Pyrene	ug/kg	195	1400 U	920 U	1900 U	**600 J**	1700 U
Metals							
Arsenic	mg/kg	8.2	**9.9**	**10.4**	**11.2**	**10**	**15.9**
Cadmium	mg/kg	1.2	**5.0**	**2.0**	**3.1**	**3.0**	**2.8**
Chromium Total	mg/kg	26	**47.0 J**	**64.1 J**	**70.6 J**	**69.1 J**	**78.6 J**
Cobalt	mg/kg	50	**58.1 J**	24.7 J	**51.6 J**	**52.0 J**	36.2 J
Copper	mg/kg	34	26.5	29.6	**41.2**	**40.2**	**43.2**
Iron	mg/kg	20000	16100 J	**20500 J**	**28900 J**	**28200 J**	**32500 J**
Lead	mg/kg	46.7	35.1 J	41.1 J	39.5 J	38.3 J	**52.8 J**
Manganese	mg/kg	460	**586 J**	**2590 J**	**1610 J**	**1580 J**	**2450 J**
Mercury~E1631	mg/kg	0.15	**24.247**	**63.881**	**56.902**	**24.928**	**27.091**
Mercury~SW7471	mg/kg	0.15	**30.2**	**86.6**	**56.4 J**	2.0 U	**47.0**
Nickel	mg/kg	20.9	**43.0 J**	**31.6 J**	**51.0 J**	**50.2 J**	**46.2 J**
Selenium	mg/kg	1	**3.4 L**	**2.5 L**	**3.4 L**	1.8 UL	**3.7 L**
Silver	mg/kg	1	0.32 U	0.21 U	0.44 U	0.45 U	0.40 U
Vanadium	mg/kg	57	35.7	48.0	52.1	52.6	**72.8**
Zinc	mg/kg	150	**323 J**	**278 J**	**512 J**	**517 J**	**504 J**
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 1*	*CHEM 2*	*CHEM 3*	*CHEM 4*	*CHEM 5*
Sample ID:			*SED-7462-060106-CJP-032*	*SED-7462-060106-CJP-035*	*SED-7462-060106-CJP-023*	*SED-7462-060106-CJP-027*	*SED-7462-060106-CJP-039*
Sample Date:			*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/kg	170	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/kg	1400	-	-	-	-	-
1,1,2-Trichloroethane	ug/kg	1200	-	-	-	-	-
1,1-Dichloroethane	ug/kg	27	-	-	-	-	-
1,1-Dichloroethene	ug/kg	31	-	-	-	-	-
1,2,3-Trichlorobenzene	ug/kg	-	-	-	20 J	89	10 J
1,2,4-Trichlorobenzene	ug/kg	9600	-	-	20 J	550	20 J
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	167	-	-	-	-	-
1,2-Dichlorobenzene	ug/kg	330	-	-	48	**69000 D**	160
1,2-Dichloroethane	ug/kg	250	-	-	-	-	-
1,2-Dichloropropane	ug/kg	4928	-	-	-	-	-
1,3-Dichlorobenzene	ug/kg	1700	-	-	81	**26000 D**	880
1,4-Dichlorobenzene	ug/kg	340	-	-	210	**320000 D**	**29000 D**
2-Butanone (Methyl Ethyl Ketone)	ug/kg	270	-	-	-	-	-
2-Hexanone	ug/kg	22	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	33	-	-	-	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Bromodichloromethane	ug/kg	1276	-	-	-	-	-
Bromoform	ug/kg	650	-	-	-	-	-
Bromomethane (Methyl Bromide)	ug/kg	16.3	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Carbon tetrachloride	ug/kg	47	-	-	-	-	-
Chlorobenzene	ug/kg	410	-	-	97	**150000 D**	**28000 D**
Chloroethane	ug/kg	-	-	-	-	-	-
Chloroform (Trichloromethane)	ug/kg	22	-	-	-	-	-
Chloromethane (Methyl Chloride)	ug/kg	432	-	-	-	-	-
cis-1,2-Dichloroethene	ug/kg	782	-	-	-	-	-
cis-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Cyclohexane	ug/kg	-	-	-	-	-	-
Dibromochloromethane	ug/kg	1495	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/kg	-	-	-	-	-	-
Ethylbenzene	ug/kg	89	-	-	-	-	-
Isopropylbenzene	ug/kg	-	-	-	-	-	-
Methyl acetate	ug/kg	-	-	-	-	-	-
Methyl cyclohexane	ug/kg	-	-	-	-	-	-
Methyl Tert Butyl Ether	ug/kg	-	-	-	-	-	-
Methylene chloride	ug/kg	370	-	-	-	-	-
Styrene	ug/kg	1872	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 1*	*CHEM 2*	*CHEM 3*	*CHEM 4*	*CHEM 5*
Sample ID:			*SED-7462-060106-CJP-032*	*SED-7462-060106-CJP-035*	*SED-7462-060106-CJP-023*	*SED-7462-060106-CJP-027*	*SED-7462-060106-CJP-039*
Sample Date:			*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Tetrachloroethene	ug/kg	410	-	-	-	-	-
Toluene	ug/kg	50	-	-	-	-	-
trans-1,2-Dichloroethene	ug/kg	400	-	-	-	-	-
trans-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Trichloroethene	ug/kg	220	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/kg	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	ug/kg	-	-	-	-	-	-
Vinyl chloride	ug/kg	346	-	-	-	-	-
Xylene (total)	ug/kg	160	-	-	-	-	-
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/kg	4299	-	-	-	-	-
2,4,6-Trichlorophenol	ug/kg	42087	-	-	-	-	-
2,4-Dichlorophenol	ug/kg	3892	-	-	-	-	-
2,4-Dimethylphenol	ug/kg	1108	-	-	-	-	-
2,4-Dinitrophenol	ug/kg	50.1	-	-	-	-	-
2,4-Dinitrotoluene	ug/kg	218	-	-	-	-	-
2,6-Dinitrotoluene	ug/kg	41.4	-	-	-	-	-
2-Chloronaphthalene	ug/kg	66523	-	-	-	-	-
2-Chlorophenol	ug/kg	126	-	-	-	-	-
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
2-Methylphenol	ug/kg	12	-	-	-	-	-
2-Nitroaniline	ug/kg	1697	-	-	-	-	-
2-Nitrophenol	ug/kg	88.3	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/kg	296	-	-	-	-	-
3-Nitroaniline	ug/kg	238	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/kg	-	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/kg	1200	-	-	-	-	-
4-Chloro-3-methylphenol	ug/kg	-	-	-	-	-	-
4-Chloroaniline	ug/kg	32.9	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/kg	-	-	-	-	-	-
4-Methylphenol	ug/kg	670	-	-	-	-	-
4-Nitroaniline	ug/kg	-	-	-	-	-	-
4-Nitrophenol	ug/kg	111	-	-	-	-	-
Acenaphthene	ug/kg	16	-	-	-	-	-
Acenaphthylene	ug/kg	44	-	-	-	-	-
Acetophenone	ug/kg	-	-	-	-	-	-
Anthracene	ug/kg	57	-	-	-	-	-
Atrazine	ug/kg	-	-	-	-	-	-
Benzaldehyde	ug/kg	-	-	-	-	-	-
Benzo(a)anthracene	ug/kg	110	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 1*	*CHEM 2*	*CHEM 3*	*CHEM 4*	*CHEM 5*
Sample ID:			*SED-7462-060106-CJP-032*	*SED-7462-060106-CJP-035*	*SED-7462-060106-CJP-023*	*SED-7462-060106-CJP-027*	*SED-7462-060106-CJP-039*
Sample Date:			*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Benzo(a)pyrene	ug/kg	140	-	-	-	-	-
Benzo(b)fluoranthene	ug/kg	27	-	-	-	-	-
Benzo(g,h,i)perylene	ug/kg	170	-	-	-	-	-
Benzo(k)fluoranthene	ug/kg	27	-	-	-	-	-
Biphenyl	ug/kg	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/kg	60.1	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/kg	368	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Butyl benzylphthalate	ug/kg	11000	-	-	-	-	-
Caprolactam	ug/kg	-	-	-	-	-	-
Carbazole	ug/kg	33826	-	-	-	-	-
Chrysene	ug/kg	166	-	-	-	-	-
Dibenz(a,h)anthracene	ug/kg	63.4	-	-	-	-	-
Dibenzofuran	ug/kg	420	-	-	-	-	-
Diethyl phthalate	ug/kg	600	-	-	-	-	-
Dimethyl phthalate	ug/kg	115	-	-	-	-	-
Di-n-butylphthalate	ug/kg	11000	-	-	-	-	-
Di-n-octyl phthalate	ug/kg	2514093	-	-	-	-	-
Fluoranthene	ug/kg	423	-	-	-	-	-
Fluorene	ug/kg	190	-	-	-	-	-
Hexachlorobenzene	ug/kg	22699	-	-	-	-	-
Hexachlorobutadiene	ug/kg	4977	-	-	-	-	-
Hexachlorocyclopentadiene	ug/kg	10343	-	-	-	-	-
Hexachloroethane	ug/kg	1000	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/kg	200	-	-	-	-	-
Isophorone	ug/kg	5490	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Nitrobenzene	ug/kg	1739	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/kg	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/kg	7477	-	-	-	-	-
Pentachlorophenol	ug/kg	6758	-	-	-	-	-
Phenanthrene	ug/kg	204	-	-	-	-	-
Phenol	ug/kg	31	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Aluminum	mg/kg	25500	-	-	-	-	-
Antimony	mg/kg	2	-	-	-	-	-
Arsenic	mg/kg	8.2	-	-	-	-	-
Barium	mg/kg	500	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 1*	*CHEM 2*	*CHEM 3*	*CHEM 4*	*CHEM 5*
Sample ID:			*SED-7462-060106-CJP-032*	*SED-7462-060106-CJP-035*	*SED-7462-060106-CJP-023*	*SED-7462-060106-CJP-027*	*SED-7462-060106-CJP-039*
Sample Date:			*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*	*6/1/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Calcium	mg/kg	-	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**1920 B**	**235**	**128**	**59.0**	**24.0 B**
Methyl mercury	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	20.9	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
General Chemistry							
Percent Moisture	%	-	87.3	88.4	81.4	82.8	74.0
Total Organic Carbon (TOC)	mg/kg	-	-	-	-	-	-
Total Solids	%	-	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 6*	*CHEM 7*	*CHEM 8*	*CHEM 9*	*CORE 1*
Sample ID:			*SED-7462-053106-CJP-015*	*SED-7462-053106-CJP-019*	*SED-7462-053106-CJP-011*	*SED-7462-053006-CJP-001*	*SED-7462-061906-CJP-044*
Sample Date:			*5/31/2006*	*5/31/2006*	*5/31/2006*	*5/30/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/kg	170	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/kg	1400	-	-	-	-	-
1,1,2-Trichloroethane	ug/kg	1200	-	-	-	-	-
1,1-Dichloroethane	ug/kg	27	-	-	-	-	-
1,1-Dichloroethene	ug/kg	31	-	-	-	-	-
1,2,3-Trichlorobenzene	ug/kg	-	74 U	60 J	75 U	30 J	-
1,2,4-Trichlorobenzene	ug/kg	9600	50 J	70 J	75 U	30 J	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	167	-	-	-	-	-
1,2-Dichlorobenzene	ug/kg	330	290	250	130	130	-
1,2-Dichloroethane	ug/kg	250	-	-	-	-	-
1,2-Dichloropropane	ug/kg	4928	-	-	-	-	-
1,3-Dichlorobenzene	ug/kg	1700	370	410	260	150	-
1,4-Dichlorobenzene	ug/kg	340	**1300**	**750**	**500**	290	-
2-Butanone (Methyl Ethyl Ketone)	ug/kg	270	-	-	-	-	-
2-Hexanone	ug/kg	22	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	33	-	-	-	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Bromodichloromethane	ug/kg	1276	-	-	-	-	-
Bromoform	ug/kg	650	-	-	-	-	-
Bromomethane (Methyl Bromide)	ug/kg	16.3	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Carbon tetrachloride	ug/kg	47	-	-	-	-	-
Chlorobenzene	ug/kg	410	**1600**	350	250	150	-
Chloroethane	ug/kg	-	-	-	-	-	-
Chloroform (Trichloromethane)	ug/kg	22	-	-	-	-	-
Chloromethane (Methyl Chloride)	ug/kg	432	-	-	-	-	-
cis-1,2-Dichloroethene	ug/kg	782	-	-	-	-	-
cis-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Cyclohexane	ug/kg	-	-	-	-	-	-
Dibromochloromethane	ug/kg	1495	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/kg	-	-	-	-	-	-
Ethylbenzene	ug/kg	89	-	-	-	-	-
Isopropylbenzene	ug/kg	-	-	-	-	-	-
Methyl acetate	ug/kg	-	-	-	-	-	-
Methyl cyclohexane	ug/kg	-	-	-	-	-	-
Methyl Tert Butyl Ether	ug/kg	-	-	-	-	-	-
Methylene chloride	ug/kg	370	-	-	-	-	-
Styrene	ug/kg	1872	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 6*	*CHEM 7*	*CHEM 8*	*CHEM 9*	*CORE 1*
Sample ID:			*SED-7462-053106-CJP-015*	*SED-7462-053106-CJP-019*	*SED-7462-053106-CJP-011*	*SED-7462-053006-CJP-001*	*SED-7462-061906-CJP-044*
Sample Date:			*5/31/2006*	*5/31/2006*	*5/31/2006*	*5/30/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Tetrachloroethene	ug/kg	410	-	-	-	-	-
Toluene	ug/kg	50	-	-	-	-	-
trans-1,2-Dichloroethene	ug/kg	400	-	-	-	-	-
trans-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Trichloroethene	ug/kg	220	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/kg	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	ug/kg	-	-	-	-	-	-
Vinyl chloride	ug/kg	346	-	-	-	-	-
Xylene (total)	ug/kg	160	-	-	-	-	-
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/kg	4299	-	-	-	-	-
2,4,6-Trichlorophenol	ug/kg	42087	-	-	-	-	-
2,4-Dichlorophenol	ug/kg	3892	-	-	-	-	-
2,4-Dimethylphenol	ug/kg	1108	-	-	-	-	-
2,4-Dinitrophenol	ug/kg	50.1	-	-	-	-	-
2,4-Dinitrotoluene	ug/kg	218	-	-	-	-	-
2,6-Dinitrotoluene	ug/kg	41.4	-	-	-	-	-
2-Chloronaphthalene	ug/kg	66523	-	-	-	-	-
2-Chlorophenol	ug/kg	126	-	-	-	-	-
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
2-Methylphenol	ug/kg	12	-	-	-	-	-
2-Nitroaniline	ug/kg	1697	-	-	-	-	-
2-Nitrophenol	ug/kg	88.3	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/kg	296	-	-	-	-	-
3-Nitroaniline	ug/kg	238	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/kg	-	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/kg	1200	-	-	-	-	-
4-Chloro-3-methylphenol	ug/kg	-	-	-	-	-	-
4-Chloroaniline	ug/kg	32.9	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/kg	-	-	-	-	-	-
4-Methylphenol	ug/kg	670	-	-	-	-	-
4-Nitroaniline	ug/kg	-	-	-	-	-	-
4-Nitrophenol	ug/kg	111	-	-	-	-	-
Acenaphthene	ug/kg	16	-	-	-	-	-
Acenaphthylene	ug/kg	44	-	-	-	-	-
Acetophenone	ug/kg	-	-	-	-	-	-
Anthracene	ug/kg	57	-	-	-	-	-
Atrazine	ug/kg	-	-	-	-	-	-
Benzaldehyde	ug/kg	-	-	-	-	-	-
Benzo(a)anthracene	ug/kg	110	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 6*	*CHEM 7*	*CHEM 8*	*CHEM 9*	*CORE 1*
Sample ID:			*SED-7462-053106-CJP-015*	*SED-7462-053106-CJP-019*	*SED-7462-053106-CJP-011*	*SED-7462-053006-CJP-001*	*SED-7462-061906-CJP-044*
Sample Date:			*5/31/2006*	*5/31/2006*	*5/31/2006*	*5/30/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Benzo(a)pyrene	ug/kg	140	-	-	-	-	-
Benzo(b)fluoranthene	ug/kg	27	-	-	-	-	-
Benzo(g,h,i)perylene	ug/kg	170	-	-	-	-	-
Benzo(k)fluoranthene	ug/kg	27	-	-	-	-	-
Biphenyl	ug/kg	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/kg	60.1	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/kg	368	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Butyl benzylphthalate	ug/kg	11000	-	-	-	-	-
Caprolactam	ug/kg	-	-	-	-	-	-
Carbazole	ug/kg	33826	-	-	-	-	-
Chrysene	ug/kg	166	-	-	-	-	-
Dibenz(a,h)anthracene	ug/kg	63.4	-	-	-	-	-
Dibenzofuran	ug/kg	420	-	-	-	-	-
Diethyl phthalate	ug/kg	600	-	-	-	-	-
Dimethyl phthalate	ug/kg	115	-	-	-	-	-
Di-n-butylphthalate	ug/kg	11000	-	-	-	-	-
Di-n-octyl phthalate	ug/kg	2514093	-	-	-	-	-
Fluoranthene	ug/kg	423	-	-	-	-	-
Fluorene	ug/kg	190	-	-	-	-	-
Hexachlorobenzene	ug/kg	22699	-	-	-	-	-
Hexachlorobutadiene	ug/kg	4977	-	-	-	-	-
Hexachlorocyclopentadiene	ug/kg	10343	-	-	-	-	-
Hexachloroethane	ug/kg	1000	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/kg	200	-	-	-	-	-
Isophorone	ug/kg	5490	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Nitrobenzene	ug/kg	1739	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/kg	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/kg	7477	-	-	-	-	-
Pentachlorophenol	ug/kg	6758	-	-	-	-	-
Phenanthrene	ug/kg	204	-	-	-	-	-
Phenol	ug/kg	31	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Aluminum	mg/kg	25500	-	-	-	-	-
Antimony	mg/kg	2	-	-	-	-	-
Arsenic	mg/kg	8.2	-	-	-	-	-
Barium	mg/kg	500	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CHEM 6*	*CHEM 7*	*CHEM 8*	*CHEM 9*	*CORE 1*
Sample ID:			*SED-7462-053106-CJP-015*	*SED-7462-053106-CJP-019*	*SED-7462-053106-CJP-011*	*SED-7462-053006-CJP-001*	*SED-7462-061906-CJP-044*
Sample Date:			*5/31/2006*	*5/31/2006*	*5/31/2006*	*5/30/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*	*(0-0.08) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Calcium	mg/kg	-	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**85.7 N***	**79.7 N***	**61.5 N***	**49.9 N***	**1430**
Methyl mercury	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	20.9	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
General Chemistry							
Percent Moisture	%	-	89.4	92.7	89.3	86.8	77.4
Total Organic Carbon (TOC)	mg/kg	-	-	-	-	-	23500
Total Solids	%	-	-	-	-	-	21.8
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*
Sample ID:			*SED-7462-061906-CJP-045*	*SED-7462-061906-CJP-046*	*SED-7462-061906-CJP-047*	*SED-7462-061906-CJP-048*	*SED-7462-061906-CJP-049*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/kg	170	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/kg	1400	-	-	-	-	-
1,1,2-Trichloroethane	ug/kg	1200	-	-	-	-	-
1,1-Dichloroethane	ug/kg	27	-	-	-	-	-
1,1-Dichloroethene	ug/kg	31	-	-	-	-	-
1,2,3-Trichlorobenzene	ug/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	ug/kg	9600	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	167	-	-	-	-	-
1,2-Dichlorobenzene	ug/kg	330	-	-	-	-	-
1,2-Dichloroethane	ug/kg	250	-	-	-	-	-
1,2-Dichloropropane	ug/kg	4928	-	-	-	-	-
1,3-Dichlorobenzene	ug/kg	1700	-	-	-	-	-
1,4-Dichlorobenzene	ug/kg	340	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	ug/kg	270	-	-	-	-	-
2-Hexanone	ug/kg	22	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	33	-	-	-	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Bromodichloromethane	ug/kg	1276	-	-	-	-	-
Bromoform	ug/kg	650	-	-	-	-	-
Bromomethane (Methyl Bromide)	ug/kg	16.3	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Carbon tetrachloride	ug/kg	47	-	-	-	-	-
Chlorobenzene	ug/kg	410	-	-	-	-	-
Chloroethane	ug/kg	-	-	-	-	-	-
Chloroform (Trichloromethane)	ug/kg	22	-	-	-	-	-
Chloromethane (Methyl Chloride)	ug/kg	432	-	-	-	-	-
cis-1,2-Dichloroethene	ug/kg	782	-	-	-	-	-
cis-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Cyclohexane	ug/kg	-	-	-	-	-	-
Dibromochloromethane	ug/kg	1495	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/kg	-	-	-	-	-	-
Ethylbenzene	ug/kg	89	-	-	-	-	-
Isopropylbenzene	ug/kg	-	-	-	-	-	-
Methyl acetate	ug/kg	-	-	-	-	-	-
Methyl cyclohexane	ug/kg	-	-	-	-	-	-
Methyl Tert Butyl Ether	ug/kg	-	-	-	-	-	-
Methylene chloride	ug/kg	370	-	-	-	-	-
Styrene	ug/kg	1872	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*
Sample ID:			*SED-7462-061906-CJP-045*	*SED-7462-061906-CJP-046*	*SED-7462-061906-CJP-047*	*SED-7462-061906-CJP-048*	*SED-7462-061906-CJP-049*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Tetrachloroethene	ug/kg	410	-	-	-	-	-
Toluene	ug/kg	50	-	-	-	-	-
trans-1,2-Dichloroethene	ug/kg	400	-	-	-	-	-
trans-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Trichloroethene	ug/kg	220	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/kg	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	ug/kg	-	-	-	-	-	-
Vinyl chloride	ug/kg	346	-	-	-	-	-
Xylene (total)	ug/kg	160	-	-	-	-	-
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/kg	4299	-	-	-	-	-
2,4,6-Trichlorophenol	ug/kg	42087	-	-	-	-	-
2,4-Dichlorophenol	ug/kg	3892	-	-	-	-	-
2,4-Dimethylphenol	ug/kg	1108	-	-	-	-	-
2,4-Dinitrophenol	ug/kg	50.1	-	-	-	-	-
2,4-Dinitrotoluene	ug/kg	218	-	-	-	-	-
2,6-Dinitrotoluene	ug/kg	41.4	-	-	-	-	-
2-Chloronaphthalene	ug/kg	66523	-	-	-	-	-
2-Chlorophenol	ug/kg	126	-	-	-	-	-
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
2-Methylphenol	ug/kg	12	-	-	-	-	-
2-Nitroaniline	ug/kg	1697	-	-	-	-	-
2-Nitrophenol	ug/kg	88.3	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/kg	296	-	-	-	-	-
3-Nitroaniline	ug/kg	238	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/kg	-	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/kg	1200	-	-	-	-	-
4-Chloro-3-methylphenol	ug/kg	-	-	-	-	-	-
4-Chloroaniline	ug/kg	32.9	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/kg	-	-	-	-	-	-
4-Methylphenol	ug/kg	670	-	-	-	-	-
4-Nitroaniline	ug/kg	-	-	-	-	-	-
4-Nitrophenol	ug/kg	111	-	-	-	-	-
Acenaphthene	ug/kg	16	-	-	-	-	-
Acenaphthylene	ug/kg	44	-	-	-	-	-
Acetophenone	ug/kg	-	-	-	-	-	-
Anthracene	ug/kg	57	-	-	-	-	-
Atrazine	ug/kg	-	-	-	-	-	-
Benzaldehyde	ug/kg	-	-	-	-	-	-
Benzo(a)anthracene	ug/kg	110	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*
Sample ID:			*SED-7462-061906-CJP-045*	*SED-7462-061906-CJP-046*	*SED-7462-061906-CJP-047*	*SED-7462-061906-CJP-048*	*SED-7462-061906-CJP-049*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Benzo(a)pyrene	ug/kg	140	-	-	-	-	-
Benzo(b)fluoranthene	ug/kg	27	-	-	-	-	-
Benzo(g,h,i)perylene	ug/kg	170	-	-	-	-	-
Benzo(k)fluoranthene	ug/kg	27	-	-	-	-	-
Biphenyl	ug/kg	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/kg	60.1	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/kg	368	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Butyl benzylphthalate	ug/kg	11000	-	-	-	-	-
Caprolactam	ug/kg	-	-	-	-	-	-
Carbazole	ug/kg	33826	-	-	-	-	-
Chrysene	ug/kg	166	-	-	-	-	-
Dibenz(a,h)anthracene	ug/kg	63.4	-	-	-	-	-
Dibenzofuran	ug/kg	420	-	-	-	-	-
Diethyl phthalate	ug/kg	600	-	-	-	-	-
Dimethyl phthalate	ug/kg	115	-	-	-	-	-
Di-n-butylphthalate	ug/kg	11000	-	-	-	-	-
Di-n-octyl phthalate	ug/kg	2514093	-	-	-	-	-
Fluoranthene	ug/kg	423	-	-	-	-	-
Fluorene	ug/kg	190	-	-	-	-	-
Hexachlorobenzene	ug/kg	22699	-	-	-	-	-
Hexachlorobutadiene	ug/kg	4977	-	-	-	-	-
Hexachlorocyclopentadiene	ug/kg	10343	-	-	-	-	-
Hexachloroethane	ug/kg	1000	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/kg	200	-	-	-	-	-
Isophorone	ug/kg	5490	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Nitrobenzene	ug/kg	1739	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/kg	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/kg	7477	-	-	-	-	-
Pentachlorophenol	ug/kg	6758	-	-	-	-	-
Phenanthrene	ug/kg	204	-	-	-	-	-
Phenol	ug/kg	31	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Aluminum	mg/kg	25500	-	-	-	-	-
Antimony	mg/kg	2	-	-	-	-	-
Arsenic	mg/kg	8.2	-	-	-	-	-
Barium	mg/kg	500	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*	*CORE 1*
Sample ID:			*SED-7462-061906-CJP-045*	*SED-7462-061906-CJP-046*	*SED-7462-061906-CJP-047*	*SED-7462-061906-CJP-048*	*SED-7462-061906-CJP-049*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Calcium	mg/kg	-	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**1220**	**1290**	**1090**	**412**	**50.4**
Methyl mercury	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	20.9	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
General Chemistry							
Percent Moisture	%	-	73.7	76.4	67.0	60.2	55.3
Total Organic Carbon (TOC)	mg/kg	-	22700	25800	21100	17600	18700
Total Solids	%	-	22.9	20.9	29.1	40.1	44.8
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*
Sample ID:			*SED-7462-061906-CJP-057*	*SED-7462-061906-CJP-058*	*SED-7462-061906-CJP-059*	*SED-7462-061906-CJP-060*	*SED-7462-061906-CJP-061*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/kg	170	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/kg	1400	-	-	-	-	-
1,1,2-Trichloroethane	ug/kg	1200	-	-	-	-	-
1,1-Dichloroethane	ug/kg	27	-	-	-	-	-
1,1-Dichloroethene	ug/kg	31	-	-	-	-	-
1,2,3-Trichlorobenzene	ug/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	ug/kg	9600	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	167	-	-	-	-	-
1,2-Dichlorobenzene	ug/kg	330	-	-	-	-	-
1,2-Dichloroethane	ug/kg	250	-	-	-	-	-
1,2-Dichloropropane	ug/kg	4928	-	-	-	-	-
1,3-Dichlorobenzene	ug/kg	1700	-	-	-	-	-
1,4-Dichlorobenzene	ug/kg	340	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	ug/kg	270	-	-	-	-	-
2-Hexanone	ug/kg	22	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	33	-	-	-	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Bromodichloromethane	ug/kg	1276	-	-	-	-	-
Bromoform	ug/kg	650	-	-	-	-	-
Bromomethane (Methyl Bromide)	ug/kg	16.3	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Carbon tetrachloride	ug/kg	47	-	-	-	-	-
Chlorobenzene	ug/kg	410	-	-	-	-	-
Chloroethane	ug/kg	-	-	-	-	-	-
Chloroform (Trichloromethane)	ug/kg	22	-	-	-	-	-
Chloromethane (Methyl Chloride)	ug/kg	432	-	-	-	-	-
cis-1,2-Dichloroethene	ug/kg	782	-	-	-	-	-
cis-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Cyclohexane	ug/kg	-	-	-	-	-	-
Dibromochloromethane	ug/kg	1495	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/kg	-	-	-	-	-	-
Ethylbenzene	ug/kg	89	-	-	-	-	-
Isopropylbenzene	ug/kg	-	-	-	-	-	-
Methyl acetate	ug/kg	-	-	-	-	-	-
Methyl cyclohexane	ug/kg	-	-	-	-	-	-
Methyl Tert Butyl Ether	ug/kg	-	-	-	-	-	-
Methylene chloride	ug/kg	370	-	-	-	-	-
Styrene	ug/kg	1872	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*
Sample ID:			*SED-7462-061906-CJP-057*	*SED-7462-061906-CJP-058*	*SED-7462-061906-CJP-059*	*SED-7462-061906-CJP-060*	*SED-7462-061906-CJP-061*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Tetrachloroethene	ug/kg	410	-	-	-	-	-
Toluene	ug/kg	50	-	-	-	-	-
trans-1,2-Dichloroethene	ug/kg	400	-	-	-	-	-
trans-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Trichloroethene	ug/kg	220	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/kg	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	ug/kg	-	-	-	-	-	-
Vinyl chloride	ug/kg	346	-	-	-	-	-
Xylene (total)	ug/kg	160	-	-	-	-	-
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/kg	4299	-	-	-	-	-
2,4,6-Trichlorophenol	ug/kg	42087	-	-	-	-	-
2,4-Dichlorophenol	ug/kg	3892	-	-	-	-	-
2,4-Dimethylphenol	ug/kg	1108	-	-	-	-	-
2,4-Dinitrophenol	ug/kg	50.1	-	-	-	-	-
2,4-Dinitrotoluene	ug/kg	218	-	-	-	-	-
2,6-Dinitrotoluene	ug/kg	41.4	-	-	-	-	-
2-Chloronaphthalene	ug/kg	66523	-	-	-	-	-
2-Chlorophenol	ug/kg	126	-	-	-	-	-
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
2-Methylphenol	ug/kg	12	-	-	-	-	-
2-Nitroaniline	ug/kg	1697	-	-	-	-	-
2-Nitrophenol	ug/kg	88.3	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/kg	296	-	-	-	-	-
3-Nitroaniline	ug/kg	238	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/kg	-	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/kg	1200	-	-	-	-	-
4-Chloro-3-methylphenol	ug/kg	-	-	-	-	-	-
4-Chloroaniline	ug/kg	32.9	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/kg	-	-	-	-	-	-
4-Methylphenol	ug/kg	670	-	-	-	-	-
4-Nitroaniline	ug/kg	-	-	-	-	-	-
4-Nitrophenol	ug/kg	111	-	-	-	-	-
Acenaphthene	ug/kg	16	-	-	-	-	-
Acenaphthylene	ug/kg	44	-	-	-	-	-
Acetophenone	ug/kg	-	-	-	-	-	-
Anthracene	ug/kg	57	-	-	-	-	-
Atrazine	ug/kg	-	-	-	-	-	-
Benzaldehyde	ug/kg	-	-	-	-	-	-
Benzo(a)anthracene	ug/kg	110	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*
Sample ID:			*SED-7462-061906-CJP-057*	*SED-7462-061906-CJP-058*	*SED-7462-061906-CJP-059*	*SED-7462-061906-CJP-060*	*SED-7462-061906-CJP-061*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Benzo(a)pyrene	ug/kg	140	-	-	-	-	-
Benzo(b)fluoranthene	ug/kg	27	-	-	-	-	-
Benzo(g,h,i)perylene	ug/kg	170	-	-	-	-	-
Benzo(k)fluoranthene	ug/kg	27	-	-	-	-	-
Biphenyl	ug/kg	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/kg	60.1	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/kg	368	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Butyl benzylphthalate	ug/kg	11000	-	-	-	-	-
Caprolactam	ug/kg	-	-	-	-	-	-
Carbazole	ug/kg	33826	-	-	-	-	-
Chrysene	ug/kg	166	-	-	-	-	-
Dibenz(a,h)anthracene	ug/kg	63.4	-	-	-	-	-
Dibenzofuran	ug/kg	420	-	-	-	-	-
Diethyl phthalate	ug/kg	600	-	-	-	-	-
Dimethyl phthalate	ug/kg	115	-	-	-	-	-
Di-n-butylphthalate	ug/kg	11000	-	-	-	-	-
Di-n-octyl phthalate	ug/kg	2514093	-	-	-	-	-
Fluoranthene	ug/kg	423	-	-	-	-	-
Fluorene	ug/kg	190	-	-	-	-	-
Hexachlorobenzene	ug/kg	22699	-	-	-	-	-
Hexachlorobutadiene	ug/kg	4977	-	-	-	-	-
Hexachlorocyclopentadiene	ug/kg	10343	-	-	-	-	-
Hexachloroethane	ug/kg	1000	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/kg	200	-	-	-	-	-
Isophorone	ug/kg	5490	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Nitrobenzene	ug/kg	1739	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/kg	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/kg	7477	-	-	-	-	-
Pentachlorophenol	ug/kg	6758	-	-	-	-	-
Phenanthrene	ug/kg	204	-	-	-	-	-
Phenol	ug/kg	31	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Aluminum	mg/kg	25500	-	-	-	-	-
Antimony	mg/kg	2	-	-	-	-	-
Arsenic	mg/kg	8.2	-	-	-	-	-
Barium	mg/kg	500	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*	*CORE 2*
Sample ID:			*SED-7462-061906-CJP-057*	*SED-7462-061906-CJP-058*	*SED-7462-061906-CJP-059*	*SED-7462-061906-CJP-060*	*SED-7462-061906-CJP-061*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*	*(0.33-0.42) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Calcium	mg/kg	-	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**79.8**	**79.2**	**4.9**	**70.2**	**21.4**
Methyl mercury	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	20.9	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
General Chemistry							
Percent Moisture	%	-	76.2	73.9	73.5	66.3	53.6
Total Organic Carbon (TOC)	mg/kg	-	49800	52600	53200	50300	36900
Total Solids	%	-	21.7	21.0	21.3	31.3	44.2
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 3*	*CORE 3*	*CORE 3*	*CORE 3*
Sample ID:			*SED-7462-061906-CJP-062*	*SED-7462-061906-CJP-069*	*SED-7462-061906-CJP-070*	*SED-7462-061906-CJP-071*	*SED-7462-061906-CJP-072*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.42-0.5) ft bgs*	*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/kg	170	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/kg	1400	-	-	-	-	-
1,1,2-Trichloroethane	ug/kg	1200	-	-	-	-	-
1,1-Dichloroethane	ug/kg	27	-	-	-	-	-
1,1-Dichloroethene	ug/kg	31	-	-	-	-	-
1,2,3-Trichlorobenzene	ug/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	ug/kg	9600	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	167	-	-	-	-	-
1,2-Dichlorobenzene	ug/kg	330	-	-	-	-	-
1,2-Dichloroethane	ug/kg	250	-	-	-	-	-
1,2-Dichloropropane	ug/kg	4928	-	-	-	-	-
1,3-Dichlorobenzene	ug/kg	1700	-	-	-	-	-
1,4-Dichlorobenzene	ug/kg	340	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	ug/kg	270	-	-	-	-	-
2-Hexanone	ug/kg	22	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	33	-	-	-	-	-
Acetone	ug/kg	8.7	-	-	-	-	-
Benzene	ug/kg	160	-	-	-	-	-
Bromodichloromethane	ug/kg	1276	-	-	-	-	-
Bromoform	ug/kg	650	-	-	-	-	-
Bromomethane (Methyl Bromide)	ug/kg	16.3	-	-	-	-	-
Carbon disulfide	ug/kg	0.85	-	-	-	-	-
Carbon tetrachloride	ug/kg	47	-	-	-	-	-
Chlorobenzene	ug/kg	410	-	-	-	-	-
Chloroethane	ug/kg	-	-	-	-	-	-
Chloroform (Trichloromethane)	ug/kg	22	-	-	-	-	-
Chloromethane (Methyl Chloride)	ug/kg	432	-	-	-	-	-
cis-1,2-Dichloroethene	ug/kg	782	-	-	-	-	-
cis-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Cyclohexane	ug/kg	-	-	-	-	-	-
Dibromochloromethane	ug/kg	1495	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/kg	-	-	-	-	-	-
Ethylbenzene	ug/kg	89	-	-	-	-	-
Isopropylbenzene	ug/kg	-	-	-	-	-	-
Methyl acetate	ug/kg	-	-	-	-	-	-
Methyl cyclohexane	ug/kg	-	-	-	-	-	-
Methyl Tert Butyl Ether	ug/kg	-	-	-	-	-	-
Methylene chloride	ug/kg	370	-	-	-	-	-
Styrene	ug/kg	1872	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 3*	*CORE 3*	*CORE 3*	*CORE 3*
Sample ID:			*SED-7462-061906-CJP-062*	*SED-7462-061906-CJP-069*	*SED-7462-061906-CJP-070*	*SED-7462-061906-CJP-071*	*SED-7462-061906-CJP-072*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.42-0.5) ft bgs*	*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Tetrachloroethene	ug/kg	410	-	-	-	-	-
Toluene	ug/kg	50	-	-	-	-	-
trans-1,2-Dichloroethene	ug/kg	400	-	-	-	-	-
trans-1,3-Dichloropropene	ug/kg	226	-	-	-	-	-
Trichloroethene	ug/kg	220	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/kg	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	ug/kg	-	-	-	-	-	-
Vinyl chloride	ug/kg	346	-	-	-	-	-
Xylene (total)	ug/kg	160	-	-	-	-	-
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/kg	4299	-	-	-	-	-
2,4,6-Trichlorophenol	ug/kg	42087	-	-	-	-	-
2,4-Dichlorophenol	ug/kg	3892	-	-	-	-	-
2,4-Dimethylphenol	ug/kg	1108	-	-	-	-	-
2,4-Dinitrophenol	ug/kg	50.1	-	-	-	-	-
2,4-Dinitrotoluene	ug/kg	218	-	-	-	-	-
2,6-Dinitrotoluene	ug/kg	41.4	-	-	-	-	-
2-Chloronaphthalene	ug/kg	66523	-	-	-	-	-
2-Chlorophenol	ug/kg	126	-	-	-	-	-
2-Methylnaphthalene	ug/kg	70	-	-	-	-	-
2-Methylphenol	ug/kg	12	-	-	-	-	-
2-Nitroaniline	ug/kg	1697	-	-	-	-	-
2-Nitrophenol	ug/kg	88.3	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/kg	296	-	-	-	-	-
3-Nitroaniline	ug/kg	238	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/kg	-	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/kg	1200	-	-	-	-	-
4-Chloro-3-methylphenol	ug/kg	-	-	-	-	-	-
4-Chloroaniline	ug/kg	32.9	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/kg	-	-	-	-	-	-
4-Methylphenol	ug/kg	670	-	-	-	-	-
4-Nitroaniline	ug/kg	-	-	-	-	-	-
4-Nitrophenol	ug/kg	111	-	-	-	-	-
Acenaphthene	ug/kg	16	-	-	-	-	-
Acenaphthylene	ug/kg	44	-	-	-	-	-
Acetophenone	ug/kg	-	-	-	-	-	-
Anthracene	ug/kg	57	-	-	-	-	-
Atrazine	ug/kg	-	-	-	-	-	-
Benzaldehyde	ug/kg	-	-	-	-	-	-
Benzo(a)anthracene	ug/kg	110	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 3*	*CORE 3*	*CORE 3*	*CORE 3*
Sample ID:			*SED-7462-061906-CJP-062*	*SED-7462-061906-CJP-069*	*SED-7462-061906-CJP-070*	*SED-7462-061906-CJP-071*	*SED-7462-061906-CJP-072*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.42-0.5) ft bgs*	*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Benzo(a)pyrene	ug/kg	140	-	-	-	-	-
Benzo(b)fluoranthene	ug/kg	27	-	-	-	-	-
Benzo(g,h,i)perylene	ug/kg	170	-	-	-	-	-
Benzo(k)fluoranthene	ug/kg	27	-	-	-	-	-
Biphenyl	ug/kg	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/kg	60.1	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/kg	368	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	-	-	-
Butyl benzylphthalate	ug/kg	11000	-	-	-	-	-
Caprolactam	ug/kg	-	-	-	-	-	-
Carbazole	ug/kg	33826	-	-	-	-	-
Chrysene	ug/kg	166	-	-	-	-	-
Dibenz(a,h)anthracene	ug/kg	63.4	-	-	-	-	-
Dibenzofuran	ug/kg	420	-	-	-	-	-
Diethyl phthalate	ug/kg	600	-	-	-	-	-
Dimethyl phthalate	ug/kg	115	-	-	-	-	-
Di-n-butylphthalate	ug/kg	11000	-	-	-	-	-
Di-n-octyl phthalate	ug/kg	2514093	-	-	-	-	-
Fluoranthene	ug/kg	423	-	-	-	-	-
Fluorene	ug/kg	190	-	-	-	-	-
Hexachlorobenzene	ug/kg	22699	-	-	-	-	-
Hexachlorobutadiene	ug/kg	4977	-	-	-	-	-
Hexachlorocyclopentadiene	ug/kg	10343	-	-	-	-	-
Hexachloroethane	ug/kg	1000	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/kg	200	-	-	-	-	-
Isophorone	ug/kg	5490	-	-	-	-	-
Naphthalene	ug/kg	176	-	-	-	-	-
Nitrobenzene	ug/kg	1739	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/kg	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/kg	7477	-	-	-	-	-
Pentachlorophenol	ug/kg	6758	-	-	-	-	-
Phenanthrene	ug/kg	204	-	-	-	-	-
Phenol	ug/kg	31	-	-	-	-	-
Pyrene	ug/kg	195	-	-	-	-	-
Metals							
Aluminum	mg/kg	25500	-	-	-	-	-
Antimony	mg/kg	2	-	-	-	-	-
Arsenic	mg/kg	8.2	-	-	-	-	-
Barium	mg/kg	500	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-
Cadmium	mg/kg	1.2	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 2*	*CORE 3*	*CORE 3*	*CORE 3*	*CORE 3*
Sample ID:			*SED-7462-061906-CJP-062*	*SED-7462-061906-CJP-069*	*SED-7462-061906-CJP-070*	*SED-7462-061906-CJP-071*	*SED-7462-061906-CJP-072*
Sample Date:			*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*	*6/19/2006*
Sample Depth:			*(0.42-0.5) ft bgs*	*(0-0.08) ft bgs*	*(0.08-0.17) ft bgs*	*(0.17-0.25) ft bgs*	*(0.25-0.33) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Calcium	mg/kg	-	-	-	-	-	-
Chromium Total	mg/kg	26	-	-	-	-	-
Cobalt	mg/kg	50	-	-	-	-	-
Copper	mg/kg	34	-	-	-	-	-
Iron	mg/kg	20000	-	-	-	-	-
Lead	mg/kg	46.7	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-
Manganese	mg/kg	460	-	-	-	-	-
Mercury~E1631	mg/kg	0.15	-	-	-	-	-
Mercury~SW7471	mg/kg	0.15	**15.2**	**49.8**	**48.1**	**40.5**	**38.0**
Methyl mercury	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	20.9	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-	-
Selenium	mg/kg	1	-	-	-	-	-
Silver	mg/kg	1	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-	-
Vanadium	mg/kg	57	-	-	-	-	-
Zinc	mg/kg	150	-	-	-	-	-
General Chemistry							
Percent Moisture	%	-	49.6	69.9	70.0	62.1	63.8
Total Organic Carbon (TOC)	mg/kg	-	28200	43300	43200	40900	38100
Total Solids	%	-	49.8	27.5	28.2	29.8	36.2
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 3*	*CORE 3*	*STATION-G*	*STATION-H*	*STATION-I*
Sample ID:			*SED-7462-061906-CJP-073*	*SED-7462-061906-CJP-074*	*SD-7462-120204-DJT-019*	*SD-7462-120204-DJT-020*	*SD-7462-120204-DJT-021*
Sample Date:			*6/19/2006*	*6/19/2006*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/kg	170	-	-	11 U	5 U	15 U
1,1,2,2-Tetrachloroethane	ug/kg	1400	-	-	11 U	5 U	15 U
1,1,2-Trichloroethane	ug/kg	1200	-	-	11 U	5 U	15 U
1,1-Dichloroethane	ug/kg	27	-	-	11 U	5 U	15 U
1,1-Dichloroethene	ug/kg	31	-	-	11 U	5 U	15 U
1,2,3-Trichlorobenzene	ug/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	ug/kg	9600	-	-	11 U	5 U	15 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	-	-	-	11 U	5 U	15 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	167	-	-	11 U	5 U	15 U
1,2-Dichlorobenzene	ug/kg	330	-	-	6 J	3 J	15
1,2-Dichloroethane	ug/kg	250	-	-	11 U	5 U	15 U
1,2-Dichloropropane	ug/kg	4928	-	-	11 U	5 U	15 U
1,3-Dichlorobenzene	ug/kg	1700	-	-	6 J	5 U	15 U
1,4-Dichlorobenzene	ug/kg	340	-	-	14	8.5	32
2-Butanone (Methyl Ethyl Ketone)	ug/kg	270	-	-	65	10 J	37 U
2-Hexanone	ug/kg	22	-	-	28 U	12 U	37 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	33	-	-	28 U	12 U	37 U
Acetone	ug/kg	8.7	-	-	**130 J**	**34 J**	**86 J**
Benzene	ug/kg	160	-	-	4 U	2 U	5 U
Bromodichloromethane	ug/kg	1276	-	-	11 U	5 U	15 U
Bromoform	ug/kg	650	-	-	11 U	5 U	15 U
Bromomethane (Methyl Bromide)	ug/kg	16.3	-	-	11 U	5 U	15 U
Carbon disulfide	ug/kg	0.85	-	-	**16**	**5.4**	**17**
Carbon tetrachloride	ug/kg	47	-	-	11 U	5 U	15 U
Chlorobenzene	ug/kg	410	-	-	13	6.1	32
Chloroethane	ug/kg	-	-	-	11 U	5 U	15 U
Chloroform (Trichloromethane)	ug/kg	22	-	-	11 U	5 U	15 U
Chloromethane (Methyl Chloride)	ug/kg	432	-	-	11 U	5 U	15 U
cis-1,2-Dichloroethene	ug/kg	782	-	-	11 U	5 U	15 U
cis-1,3-Dichloropropene	ug/kg	226	-	-	11 U	5 U	15 U
Cyclohexane	ug/kg	-	-	-	11 U	5 U	15 U
Dibromochloromethane	ug/kg	1495	-	-	11 U	5 U	15 U
Dichlorodifluoromethane (CFC-12)	ug/kg	-	-	-	11 U	5 U	15 U
Ethylbenzene	ug/kg	89	-	-	11 U	5 U	15 U
Isopropylbenzene	ug/kg	-	-	-	11 U	5 U	15 U
Methyl acetate	ug/kg	-	-	-	11 U	5 U	15 U
Methyl cyclohexane	ug/kg	-	-	-	11 U	5 U	15 U
Methyl Tert Butyl Ether	ug/kg	-	-	-	11 U	5 U	15 U
Methylene chloride	ug/kg	370	-	-	11 U	5 U	15 U
Styrene	ug/kg	1872	-	-	11 U	5 U	15 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 3*	*CORE 3*	*STATION-G*	*STATION-H*	*STATION-I*
Sample ID:			*SED-7462-061906-CJP-073*	*SED-7462-061906-CJP-074*	*SD-7462-120204-DJT-019*	*SD-7462-120204-DJT-020*	*SD-7462-120204-DJT-021*
Sample Date:			*6/19/2006*	*6/19/2006*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Tetrachloroethene	ug/kg	410	-	-	11 U	5 U	15 U
Toluene	ug/kg	50	-	-	11 U	5 U	15 U
trans-1,2-Dichloroethene	ug/kg	400	-	-	11 U	5 U	15 U
trans-1,3-Dichloropropene	ug/kg	226	-	-	11 U	5 U	15 U
Trichloroethene	ug/kg	220	-	-	11 U	5 U	15 U
Trichlorofluoromethane (CFC-11)	ug/kg	-	-	-	11 U	5 U	15 U
Trifluorotrichloroethane (Freon 113)	ug/kg	-	-	-	11 U	5 U	15 U
Vinyl chloride	ug/kg	346	-	-	11 U	5 U	15 U
Xylene (total)	ug/kg	160	-	-	11 U	5 U	15 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	-	-	-	1500 U	730 U	1400 U
2,4,5-Trichlorophenol	ug/kg	4299	-	-	3700 U	1800 U	3500 U
2,4,6-Trichlorophenol	ug/kg	42087	-	-	1500 U	730 U	1400 U
2,4-Dichlorophenol	ug/kg	3892	-	-	1500 U	730 U	1400 U
2,4-Dimethylphenol	ug/kg	1108	-	-	1500 U	730 U	1400 U
2,4-Dinitrophenol	ug/kg	50.1	-	-	3700 U	1800 U	3500 U
2,4-Dinitrotoluene	ug/kg	218	-	-	1500 U	730 U	1400 U
2,6-Dinitrotoluene	ug/kg	41.4	-	-	1500 U	730 U	1400 U
2-Chloronaphthalene	ug/kg	66523	-	-	1500 U	730 U	1400 U
2-Chlorophenol	ug/kg	126	-	-	1500 U	730 U	1400 U
2-Methylnaphthalene	ug/kg	70	-	-	900 J	730 U	1400 U
2-Methylphenol	ug/kg	12	-	-	1500 U	730 U	1400 U
2-Nitroaniline	ug/kg	1697	-	-	3700 U	1800 U	3500 U
2-Nitrophenol	ug/kg	88.3	-	-	1500 U	730 U	1400 U
3,3'-Dichlorobenzidine	ug/kg	296	-	-	1500 U	730 U	1400 U
3-Nitroaniline	ug/kg	238	-	-	3700 U	1800 U	3500 U
4,6-Dinitro-2-methylphenol	ug/kg	-	-	-	3700 U	1800 U	3500 U
4-Bromophenyl phenyl ether	ug/kg	1200	-	-	1500 U	730 U	1400 U
4-Chloro-3-methylphenol	ug/kg	-	-	-	1500 U	730 U	1400 U
4-Chloroaniline	ug/kg	32.9	-	-	1500 U	730 U	1400 U
4-Chlorophenyl phenyl ether	ug/kg	-	-	-	1500 U	730 U	1400 U
4-Methylphenol	ug/kg	670	-	-	1500 U	730 U	1400 U
4-Nitroaniline	ug/kg	-	-	-	3700 U	1800 U	3500 U
4-Nitrophenol	ug/kg	111	-	-	3700 U	1800 U	3500 U
Acenaphthene	ug/kg	16	-	-	1500 U	730 U	1400 U
Acenaphthylene	ug/kg	44	-	-	1500 U	730 U	1400 U
Acetophenone	ug/kg	-	-	-	1500 U	730 U	1400 U
Anthracene	ug/kg	57	-	-	1500 U	730 U	1400 U
Atrazine	ug/kg	-	-	-	1500 U	730 U	1400 U
Benzaldehyde	ug/kg	-	-	-	1500 U	730 UJ	1400 UJ
Benzo(a)anthracene	ug/kg	110	-	-	1500 U	730 U	1400 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 3*	*CORE 3*	*STATION-G*	*STATION-H*	*STATION-I*
Sample ID:			*SED-7462-061906-CJP-073*	*SED-7462-061906-CJP-074*	*SD-7462-120204-DJT-019*	*SD-7462-120204-DJT-020*	*SD-7462-120204-DJT-021*
Sample Date:			*6/19/2006*	*6/19/2006*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Benzo(a)pyrene	ug/kg	140	-	-	1500 U	730 U	1400 U
Benzo(b)fluoranthene	ug/kg	27	-	-	1500 U	730 U	1400 U
Benzo(g,h,i)perylene	ug/kg	170	-	-	1500 U	730 U	1400 U
Benzo(k)fluoranthene	ug/kg	27	-	-	1500 U	730 U	1400 U
Biphenyl	ug/kg	-	-	-	1500 U	730 U	1400 U
bis(2-Chloroethoxy)methane	ug/kg	60.1	-	-	1500 U	730 U	1400 U
bis(2-Chloroethyl)ether	ug/kg	368	-	-	1500 U	730 U	1400 U
bis(2-Ethylhexyl)phthalate	ug/kg	182	-	-	1500 U	**200 J**	**300 J**
Butyl benzylphthalate	ug/kg	11000	-	-	1500 U	730 U	1400 U
Caprolactam	ug/kg	-	-	-	1500 U	730 U	1400 U
Carbazole	ug/kg	33826	-	-	1500 U	730 U	1400 U
Chrysene	ug/kg	166	-	-	1500 U	730 U	1400 U
Dibenz(a,h)anthracene	ug/kg	63.4	-	-	1500 U	730 U	1400 U
Dibenzofuran	ug/kg	420	-	-	1500 U	730 U	1400 U
Diethyl phthalate	ug/kg	600	-	-	1500 U	730 U	1400 U
Dimethyl phthalate	ug/kg	115	-	-	1500 U	730 U	1400 U
Di-n-butylphthalate	ug/kg	11000	-	-	1500 U	730 U	1400 U
Di-n-octyl phthalate	ug/kg	2514093	-	-	1500 U	730 U	1400 U
Fluoranthene	ug/kg	423	-	-	1500 U	730 U	1400 U
Fluorene	ug/kg	190	-	-	1500 U	730 U	1400 U
Hexachlorobenzene	ug/kg	22699	-	-	1500 U	730 U	1400 U
Hexachlorobutadiene	ug/kg	4977	-	-	1500 U	730 U	1400 U
Hexachlorocyclopentadiene	ug/kg	10343	-	-	1500 U	730 U	1400 U
Hexachloroethane	ug/kg	1000	-	-	1500 U	730 U	1400 U
Indeno(1,2,3-cd)pyrene	ug/kg	200	-	-	1500 U	730 U	1400 U
Isophorone	ug/kg	5490	-	-	1500 U	730 U	1400 U
Naphthalene	ug/kg	176	-	-	**1000 J**	**200 J**	1400 U
Nitrobenzene	ug/kg	1739	-	-	1500 U	730 U	1400 U
N-Nitrosodi-n-propylamine	ug/kg	-	-	-	1500 U	730 U	1400 U
N-Nitrosodiphenylamine	ug/kg	7477	-	-	1500 U	730 U	1400 U
Pentachlorophenol	ug/kg	6758	-	-	3700 U	1800 U	3500 U
Phenanthrene	ug/kg	204	-	-	1500 U	730 U	1400 U
Phenol	ug/kg	31	-	-	1500 U	730 U	1400 U
Pyrene	ug/kg	195	-	-	1500 U	730 U	1400 U
Metals							
Aluminum	mg/kg	25500	-	-	23200 J	14200 J	14800 J
Antimony	mg/kg	2	-	-	1.6 UL	0.79 UL	1.5 UL
Arsenic	mg/kg	8.2	-	-	**31.6**	**15.6**	**29.2**
Barium	mg/kg	500	-	-	110 J	66.1 J	73.6 J
Beryllium	mg/kg	-	-	-	1.2	1.0	0.94
Cadmium	mg/kg	1.2	-	-	1.2	1.1	**2.2**

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*CORE 3*	*CORE 3*	*STATION-G*	*STATION-H*	*STATION-I*
Sample ID:			*SED-7462-061906-CJP-073*	*SED-7462-061906-CJP-074*	*SD-7462-120204-DJT-019*	*SD-7462-120204-DJT-020*	*SD-7462-120204-DJT-021*
Sample Date:			*6/19/2006*	*6/19/2006*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0.33-0.42) ft bgs*	*(0.42-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
Parameters	*Units*	*Sediment ESV*					
Calcium	mg/kg	-	-	-	3290 J	1620 J	2360 J
Chromium Total	mg/kg	26	-	-	**253 J**	**103 J**	**146 J**
Cobalt	mg/kg	50	-	-	10.7	10.4 J	22.4 J
Copper	mg/kg	34	-	-	14.9	28.1	25.8
Iron	mg/kg	20000	-	-	16000 J	17300 J	**22100 J**
Lead	mg/kg	46.7	-	-	28.6 J	**95.1 J**	38.2 J
Magnesium	mg/kg	-	-	-	15900 J	4630 J	5140 J
Manganese	mg/kg	460	-	-	**1080 J**	308 J	**857 J**
Mercury~E1631	mg/kg	0.15	-	-	**1382.53**	**226.782**	**336.364**
Mercury~SW7471	mg/kg	0.15	**20.8**	**23.7**	**1630**	**118**	**313**
Methyl mercury	mg/kg	-	-	-	0.0657	0.0116	0.00939
Nickel	mg/kg	20.9	-	-	20.6	**21.6 J**	**38.0 J**
Potassium	mg/kg	-	-	-	2790 J	2010 J	2150 J
Selenium	mg/kg	1	-	-	**3.6 J**	**1.3 J**	**4.3 L**
Silver	mg/kg	1	-	-	**1.4**	0.17 U	0.31 U
Sodium	mg/kg	-	-	-	5180 J	1600	2060
Thallium	mg/kg	-	-	-	1.2 UL	0.60 U	1.1 U
Vanadium	mg/kg	57	-	-	50.0 J	46.6	**109**
Zinc	mg/kg	150	-	-	141 J	**167 J**	**225 J**
General Chemistry							
Percent Moisture	%	-	56.4	50.0	77.3	55.0	76.0
Total Organic Carbon (TOC)	mg/kg	-	25900	18200	25500 J	24800 J	45000 J
Total Solids	%	-	43.2	48.6	21.9	38.6	24.7
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
D - Compounds at secondary dilution factor.							
J - Estimated concentration.							
L - Low bias.							
N* - Sample recovery not within conrol limits.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-L*	*STATION-M*	*STATION-M*
Sample ID:			*SD-7462-120204-DJT-022*	*SD-7462-120204-DJT-017*	*SD-7462-120204-DJT-014*	*SD-7462-120204-DJT-015*	*SD-7462-120204-DJT-018*
Sample Date:			*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
							(Duplicate)
Parameters	*Units*	*Sediment ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/kg	170	15 U	13 U	8 U	17 U	19 U
1,1,2,2-Tetrachloroethane	ug/kg	1400	15 U	13 U	8 U	17 U	19 U
1,1,2-Trichloroethane	ug/kg	1200	15 U	13 U	8 U	17 U	19 U
1,1-Dichloroethane	ug/kg	27	15 U	13 U	8 U	17 U	19 U
1,1-Dichloroethene	ug/kg	31	15 U	13 U	8 U	17 U	19 U
1,2,3-Trichlorobenzene	ug/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	ug/kg	9600	15 U	37	100	17 U	19 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	-	15 U	13 U	8 U	17 U	19 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	167	15 U	13 U	8 U	17 U	19 U
1,2-Dichlorobenzene	ug/kg	330	10 J	**560**	**83000**	160	75
1,2-Dichloroethane	ug/kg	250	15 U	13 U	8 U	17 U	19 U
1,2-Dichloropropane	ug/kg	4928	15 U	13 U	8 U	17 U	19 U
1,3-Dichlorobenzene	ug/kg	1700	46	430	**24000**	120	100
1,4-Dichlorobenzene	ug/kg	340	160	**30000**	**270000**	**530**	340
2-Butanone (Methyl Ethyl Ketone)	ug/kg	270	39 U	33 U	25	42 U	47 U
2-Hexanone	ug/kg	22	39 U	33 U	19 U	42 U	47 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	33	39 U	33 U	19 U	42 U	47 U
Acetone	ug/kg	8.7	**100 J**	**59 J**	**84 J**	**100 J**	**120 J**
Benzene	ug/kg	160	5 U	50	**7600**	62	26
Bromodichloromethane	ug/kg	1276	15 U	13 U	8 U	17 U	19 U
Bromoform	ug/kg	650	15 U	13 U	8 U	17 U	19 U
Bromomethane (Methyl Bromide)	ug/kg	16.3	15 U	13 U	8 U	17 U	19 U
Carbon disulfide	ug/kg	0.85	**10 J**	**25**	**18**	**29**	**29**
Carbon tetrachloride	ug/kg	47	15 U	13 U	8 U	17 U	19 U
Chlorobenzene	ug/kg	410	**550**	**51000**	**160000**	**1100**	**820**
Chloroethane	ug/kg	-	15 U	13 U	8 U	17 U	19 U
Chloroform (Trichloromethane)	ug/kg	22	15 U	13 U	8 U	17 U	19 U
Chloromethane (Methyl Chloride)	ug/kg	432	15 U	13 U	8 U	17 U	19 U
cis-1,2-Dichloroethene	ug/kg	782	15 U	13 U	8 U	17 U	19 U
cis-1,3-Dichloropropene	ug/kg	226	15 U	13 U	8 U	17 U	19 U
Cyclohexane	ug/kg	-	15 U	13 U	62	17 U	19 U
Dibromochloromethane	ug/kg	1495	15 U	13 U	8 U	17 U	19 U
Dichlorodifluoromethane (CFC-12)	ug/kg	-	15 U	13 U	8 U	17 U	19 U
Ethylbenzene	ug/kg	89	15 U	13 U	8 U	17 U	19 U
Isopropylbenzene	ug/kg	-	15 U	13 U	8 U	17 U	19 U
Methyl acetate	ug/kg	-	15 U	13 U	8 U	17 U	19 U
Methyl cyclohexane	ug/kg	-	15 U	13 U	41 J	17 U	19 U
Methyl Tert Butyl Ether	ug/kg	-	15 U	13 U	8 U	17 U	19 U
Methylene chloride	ug/kg	370	15 U	13 U	8 U	17 U	19 U
Styrene	ug/kg	1872	15 U	13 U	8 U	17 U	19 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-L*	*STATION-M*	*STATION-M*
Sample ID:			*SD-7462-120204-DJT-022*	*SD-7462-120204-DJT-017*	*SD-7462-120204-DJT-014*	*SD-7462-120204-DJT-015*	*SD-7462-120204-DJT-018*
Sample Date:			*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
							(Duplicate)
Parameters	*Units*	*Sediment ESV*					
Tetrachloroethene	ug/kg	410	15 U	13 U	8 U	17 U	19 U
Toluene	ug/kg	50	15 U	13 U	8 U	17 U	21
trans-1,2-Dichloroethene	ug/kg	400	15 U	13 U	8 U	17 U	19 U
trans-1,3-Dichloropropene	ug/kg	226	15 U	13 U	8 U	17 U	19 U
Trichloroethene	ug/kg	220	15 U	13 U	4 J	17 U	19 U
Trichlorofluoromethane (CFC-11)	ug/kg	-	15 U	13 U	8 U	17 U	19 U
Trifluorotrichloroethane (Freon 113)	ug/kg	-	15 U	13 U	8 U	17 U	19 U
Vinyl chloride	ug/kg	346	15 U	13 U	8 U	17 U	19 U
Xylene (total)	ug/kg	160	15 U	13 U	8 U	17 U	19 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	-	1500 U	1400 U	920 U	1900 U	2000 U
2,4,5-Trichlorophenol	ug/kg	4299	3700 U	3600 U	2300 U	4800 U	5000 U
2,4,6-Trichlorophenol	ug/kg	42087	1500 U	1400 U	920 U	1900 U	2000 U
2,4-Dichlorophenol	ug/kg	3892	1500 U	1400 U	300 J	1900 U	2000 U
2,4-Dimethylphenol	ug/kg	1108	1500 U	1400 U	920 U	1900 U	2000 U
2,4-Dinitrophenol	ug/kg	50.1	3700 U	3600 U	2300 U	4800 U	5000 U
2,4-Dinitrotoluene	ug/kg	218	1500 U	1400 U	920 U	1900 U	2000 U
2,6-Dinitrotoluene	ug/kg	41.4	1500 U	1400 U	920 U	1900 U	2000 U
2-Chloronaphthalene	ug/kg	66523	1500 U	1400 U	920 U	1900 U	2000 U
2-Chlorophenol	ug/kg	126	1500 U	1400 U	920 U	1900 U	2000 U
2-Methylnaphthalene	ug/kg	70	1500 U	**400 J**	920 U	1900 U	**1000 J**
2-Methylphenol	ug/kg	12	1500 U	1400 U	920 U	1900 U	2000 U
2-Nitroaniline	ug/kg	1697	3700 U	3600 U	2300 U	4800 U	5000 U
2-Nitrophenol	ug/kg	88.3	1500 U	1400 U	920 U	1900 U	2000 U
3,3'-Dichlorobenzidine	ug/kg	296	1500 U	1400 U	920 U	1900 U	2000 U
3-Nitroaniline	ug/kg	238	3700 U	3600 U	2300 U	4800 U	5000 U
4,6-Dinitro-2-methylphenol	ug/kg	-	3700 U	3600 U	2300 U	4800 U	5000 U
4-Bromophenyl phenyl ether	ug/kg	1200	1500 U	1400 U	920 U	1900 U	2000 U
4-Chloro-3-methylphenol	ug/kg	-	1500 U	1400 U	920 U	1900 U	2000 U
4-Chloroaniline	ug/kg	32.9	1500 U	1400 U	920 U	1900 U	2000 U
4-Chlorophenyl phenyl ether	ug/kg	-	1500 U	1400 U	920 U	1900 U	2000 U
4-Methylphenol	ug/kg	670	1500 U	1400 U	920 U	1900 U	2000 U
4-Nitroaniline	ug/kg	-	3700 U	3600 U	2300 U	4800 U	5000 U
4-Nitrophenol	ug/kg	111	3700 U	3600 U	2300 U	4800 U	5000 U
Acenaphthene	ug/kg	16	1500 U	1400 U	920 U	1900 U	2000 U
Acenaphthylene	ug/kg	44	1500 U	1400 U	920 U	1900 U	2000 U
Acetophenone	ug/kg	-	1500 U	1400 U	920 U	1900 U	2000 U
Anthracene	ug/kg	57	1500 U	1400 U	920 U	1900 U	2000 U
Atrazine	ug/kg	-	1500 U	1400 U	920 U	1900 U	2000 U
Benzaldehyde	ug/kg	-	1500 U	1400 UJ	920 UJ	1900 UJ	2000 UJ
Benzo(a)anthracene	ug/kg	110	1500 U	1400 U	920 U	1900 U	2000 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-L*	*STATION-M*	*STATION-M*
Sample ID:			*SD-7462-120204-DJT-022*	*SD-7462-120204-DJT-017*	*SD-7462-120204-DJT-014*	*SD-7462-120204-DJT-015*	*SD-7462-120204-DJT-018*
Sample Date:			*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
							(Duplicate)
Parameters	*Units*	*Sediment ESV*					
Benzo(a)pyrene	ug/kg	140	1500 U	1400 U	920 U	1900 U	2000 U
Benzo(b)fluoranthene	ug/kg	27	1500 U	1400 U	920 U	1900 U	2000 U
Benzo(g,h,i)perylene	ug/kg	170	1500 U	1400 U	920 U	1900 U	2000 U
Benzo(k)fluoranthene	ug/kg	27	1500 U	1400 U	920 U	1900 U	2000 U
Biphenyl	ug/kg	-	1500 U	1400 U	920 U	1900 U	2000 U
bis(2-Chloroethoxy)methane	ug/kg	60.1	1500 U	1400 U	920 U	1900 U	2000 U
bis(2-Chloroethyl)ether	ug/kg	368	1500 U	1400 U	920 U	1900 U	2000 U
bis(2-Ethylhexyl)phthalate	ug/kg	182	**400 J**	**700 J**	**400 J**	**400 J**	**400 J**
Butyl benzylphthalate	ug/kg	11000	1500 U	1400 U	920 U	1900 U	2000 U
Caprolactam	ug/kg	-	1500 U	1400 U	920 U	1900 U	2000 U
Carbazole	ug/kg	33826	1500 U	1400 U	920 U	1900 U	2000 U
Chrysene	ug/kg	166	1500 U	1400 U	920 U	1900 U	2000 U
Dibenz(a,h)anthracene	ug/kg	63.4	1500 U	1400 U	920 U	1900 U	2000 U
Dibenzofuran	ug/kg	420	1500 U	1400 U	920 U	1900 U	2000 U
Diethyl phthalate	ug/kg	600	1500 U	1400 U	920 U	1900 U	2000 U
Dimethyl phthalate	ug/kg	115	1500 U	1400 U	920 U	1900 U	2000 U
Di-n-butylphthalate	ug/kg	11000	1500 U	1400 U	920 U	1900 U	2000 U
Di-n-octyl phthalate	ug/kg	2514093	1500 U	1400 U	920 U	1900 U	2000 U
Fluoranthene	ug/kg	423	1500 U	1400 U	920 U	1900 U	2000 U
Fluorene	ug/kg	190	1500 U	1400 U	920 U	1900 U	2000 U
Hexachlorobenzene	ug/kg	22699	1500 U	1400 U	920 U	1900 U	2000 U
Hexachlorobutadiene	ug/kg	4977	1500 U	1400 U	920 U	1900 U	2000 U
Hexachlorocyclopentadiene	ug/kg	10343	1500 U	1400 U	920 U	1900 U	2000 U
Hexachloroethane	ug/kg	1000	1500 U	1400 U	920 U	1900 U	2000 U
Indeno(1,2,3-cd)pyrene	ug/kg	200	1500 U	1400 U	920 U	1900 U	2000 U
Isophorone	ug/kg	5490	1500 U	1400 U	920 U	1900 U	2000 U
Naphthalene	ug/kg	176	1500 U	**500 J**	920 U	1900 U	**900 J**
Nitrobenzene	ug/kg	1739	1500 U	1400 U	920 U	1900 U	2000 U
N-Nitrosodi-n-propylamine	ug/kg	-	1500 U	1400 U	920 U	1900 U	2000 U
N-Nitrosodiphenylamine	ug/kg	7477	1500 U	1400 U	920 U	1900 U	2000 U
Pentachlorophenol	ug/kg	6758	3700 U	3600 U	2300 U	4800 U	5000 U
Phenanthrene	ug/kg	204	1500 U	1400 U	920 U	1900 U	2000 U
Phenol	ug/kg	31	1500 U	1400 U	920 U	1900 U	2000 U
Pyrene	ug/kg	195	1500 U	1400 U	920 U	1900 U	**600 J**
Metals							
Aluminum	mg/kg	25500	12900 J	10300 J	12700 J	17200 J	16900 J
Antimony	mg/kg	2	1.6 UL	1.5 UL	0.99 UL	2.1 UL	2.1 UL
Arsenic	mg/kg	8.2	**10.8**	**9.9**	**10.4**	**11.2**	**10**
Barium	mg/kg	500	80.4 J	51.3 J	60.7 J	112 J	109 J
Beryllium	mg/kg	-	0.86	0.71	0.88	1.1	1.1
Cadmium	mg/kg	1.2	**2.5**	**5.0**	**2.0**	**3.1**	**3.0**

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-L*	*STATION-M*	*STATION-M*
Sample ID:			*SD-7462-120204-DJT-022*	*SD-7462-120204-DJT-017*	*SD-7462-120204-DJT-014*	*SD-7462-120204-DJT-015*	*SD-7462-120204-DJT-018*
Sample Date:			*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*	*12/2/2004*
Sample Depth:			*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*	*(0-0.5) ft bgs*
							(Duplicate)
Parameters	*Units*	*Sediment ESV*					
Calcium	mg/kg	-	2840 J	2150 J	3670 J	4020 J	3810 J
Chromium Total	mg/kg	26	**67.2 J**	**47.0 J**	**64.1 J**	**70.6 J**	**69.1 J**
Cobalt	mg/kg	50	27.3 J	**58.1 J**	24.7 J	**51.6 J**	**52.0 J**
Copper	mg/kg	34	**38.2**	26.5	29.6	**41.2**	**40.2**
Iron	mg/kg	20000	**22800 J**	16100 J	**20500 J**	**28900 J**	**28200 J**
Lead	mg/kg	46.7	40.8 J	35.1 J	41.1 J	39.5 J	38.3 J
Magnesium	mg/kg	-	3810 J	3250 J	3700 J	4480 J	4390 J
Manganese	mg/kg	460	**569 J**	**586 J**	**2590 J**	**1610 J**	**1580 J**
Mercury~E1631	mg/kg	0.15	**44.615**	**24.247**	**63.881**	**56.902**	**24.928**
Mercury~SW7471	mg/kg	0.15	**85.2**	**30.2**	**86.6**	**56.4 J**	2.0 U
Methyl mercury	mg/kg	-	0.0152	0.0103	0.00378	0.011	0.0101
Nickel	mg/kg	20.9	**37.7 J**	**43.0 J**	**31.6 J**	**51.0 J**	**50.2 J**
Potassium	mg/kg	-	2070 J	1550 J	1830 J	2410 J	2440 J
Selenium	mg/kg	1	**2.7 L**	**3.4 L**	**2.5 L**	**3.4 L**	1.8 UL
Silver	mg/kg	1	0.34 U	0.32 U	0.21 U	0.44 U	0.45 U
Sodium	mg/kg	-	1540	1490	1420	3370	3640
Thallium	mg/kg	-	1.2 U	1.2 U	0.75 U	1.6 U	1.6 U
Vanadium	mg/kg	57	56.4	35.7	48.0	52.1	52.6
Zinc	mg/kg	150	**347 J**	**323 J**	**278 J**	**512 J**	**517 J**
General Chemistry							
Percent Moisture	%	-	77.7	76.7	64.0	82.8	83.3
Total Organic Carbon (TOC)	mg/kg	-	63300 J	60700 J	38800 J	56900 J	57200 J
Total Solids	%	-	22.0	23.3	36.4	18.0	18.2

Notes:

B - Not detected substantially above the level reported in laboratory or field blanks.
D - Compounds at secondary dilution factor.
J - Estimated concentration.
L - Low bias.
N* - Sample recovery not within conrol limits.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			***STATION-N***
Sample ID:			***SD-7462-120204-DJT-013***
Sample Date:			***12/2/2004***
Sample Depth:			***(0-0.5) ft bgs***
Parameters	***Units***	***Sediment ESV***	
Volatile Organic Compounds			
1,1,1-Trichloroethane	ug/kg	170	19 U
1,1,2,2-Tetrachloroethane	ug/kg	1400	19 U
1,1,2-Trichloroethane	ug/kg	1200	19 U
1,1-Dichloroethane	ug/kg	27	19 U
1,1-Dichloroethene	ug/kg	31	19 U
1,2,3-Trichlorobenzene	ug/kg	-	-
1,2,4-Trichlorobenzene	ug/kg	9600	19 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	-	19 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	167	19 U
1,2-Dichlorobenzene	ug/kg	330	47
1,2-Dichloroethane	ug/kg	250	19 U
1,2-Dichloropropane	ug/kg	4928	19 U
1,3-Dichlorobenzene	ug/kg	1700	45
1,4-Dichlorobenzene	ug/kg	340	130
2-Butanone (Methyl Ethyl Ketone)	ug/kg	270	49 U
2-Hexanone	ug/kg	22	49 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	33	49 U
Acetone	ug/kg	8.7	**100 J**
Benzene	ug/kg	160	34
Bromodichloromethane	ug/kg	1276	19 U
Bromoform	ug/kg	650	19 U
Bromomethane (Methyl Bromide)	ug/kg	16.3	19 U
Carbon disulfide	ug/kg	0.85	**31**
Carbon tetrachloride	ug/kg	47	19 U
Chlorobenzene	ug/kg	410	210
Chloroethane	ug/kg	-	19 U
Chloroform (Trichloromethane)	ug/kg	22	19 U
Chloromethane (Methyl Chloride)	ug/kg	432	19 U
cis-1,2-Dichloroethene	ug/kg	782	19 U
cis-1,3-Dichloropropene	ug/kg	226	19 U
Cyclohexane	ug/kg	-	19 U
Dibromochloromethane	ug/kg	1495	19 U
Dichlorodifluoromethane (CFC-12)	ug/kg	-	19 U
Ethylbenzene	ug/kg	89	19 U
Isopropylbenzene	ug/kg	-	19 U
Methyl acetate	ug/kg	-	19 U
Methyl cyclohexane	ug/kg	-	19 U
Methyl Tert Butyl Ether	ug/kg	-	19 U
Methylene chloride	ug/kg	370	19 U
Styrene	ug/kg	1872	19 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			***STATION-N***
Sample ID:			***SD-7462-120204-DJT-013***
Sample Date:			***12/2/2004***
Sample Depth:			***(0-0.5) ft bgs***
Parameters	***Units***	***Sediment ESV***	
Tetrachloroethene	ug/kg	410	19 U
Toluene	ug/kg	50	19 U
trans-1,2-Dichloroethene	ug/kg	400	19 U
trans-1,3-Dichloropropene	ug/kg	226	19 U
Trichloroethene	ug/kg	220	19 U
Trichlorofluoromethane (CFC-11)	ug/kg	-	19 U
Trifluorotrichloroethane (Freon 113)	ug/kg	-	19 U
Vinyl chloride	ug/kg	346	19 U
Xylene (total)	ug/kg	160	19 U
Semi-volatile Organic Compounds			
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	-	1700 U
2,4,5-Trichlorophenol	ug/kg	4299	4400 U
2,4,6-Trichlorophenol	ug/kg	42087	1700 U
2,4-Dichlorophenol	ug/kg	3892	1700 U
2,4-Dimethylphenol	ug/kg	1108	1700 U
2,4-Dinitrophenol	ug/kg	50.1	4400 U
2,4-Dinitrotoluene	ug/kg	218	1700 U
2,6-Dinitrotoluene	ug/kg	41.4	1700 U
2-Chloronaphthalene	ug/kg	66523	1700 U
2-Chlorophenol	ug/kg	126	1700 U
2-Methylnaphthalene	ug/kg	70	1700 U
2-Methylphenol	ug/kg	12	1700 U
2-Nitroaniline	ug/kg	1697	4400 U
2-Nitrophenol	ug/kg	88.3	1700 U
3,3'-Dichlorobenzidine	ug/kg	296	1700 U
3-Nitroaniline	ug/kg	238	4400 U
4,6-Dinitro-2-methylphenol	ug/kg	-	4400 U
4-Bromophenyl phenyl ether	ug/kg	1200	1700 U
4-Chloro-3-methylphenol	ug/kg	-	1700 U
4-Chloroaniline	ug/kg	32.9	1700 U
4-Chlorophenyl phenyl ether	ug/kg	-	1700 U
4-Methylphenol	ug/kg	670	1700 U
4-Nitroaniline	ug/kg	-	4400 U
4-Nitrophenol	ug/kg	111	4400 U
Acenaphthene	ug/kg	16	1700 U
Acenaphthylene	ug/kg	44	1700 U
Acetophenone	ug/kg	-	1700 U
Anthracene	ug/kg	57	1700 U
Atrazine	ug/kg	-	1700 U
Benzaldehyde	ug/kg	-	1700 UJ
Benzo(a)anthracene	ug/kg	110	1700 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			***STATION-N***
Sample ID:			***SD-7462-120204-DJT-013***
Sample Date:			***12/2/2004***
Sample Depth:			***(0-0.5) ft bgs***
Parameters	***Units***	***Sediment ESV***	
Benzo(a)pyrene	ug/kg	140	1700 U
Benzo(b)fluoranthene	ug/kg	27	1700 U
Benzo(g,h,i)perylene	ug/kg	170	1700 U
Benzo(k)fluoranthene	ug/kg	27	1700 U
Biphenyl	ug/kg	-	1700 U
bis(2-Chloroethoxy)methane	ug/kg	60.1	1700 U
bis(2-Chloroethyl)ether	ug/kg	368	1700 U
bis(2-Ethylhexyl)phthalate	ug/kg	182	1700 U
Butyl benzylphthalate	ug/kg	11000	1700 U
Caprolactam	ug/kg	-	1700 U
Carbazole	ug/kg	33826	1700 U
Chrysene	ug/kg	166	1700 U
Dibenz(a,h)anthracene	ug/kg	63.4	1700 U
Dibenzofuran	ug/kg	420	1700 U
Diethyl phthalate	ug/kg	600	1700 U
Dimethyl phthalate	ug/kg	115	1700 U
Di-n-butylphthalate	ug/kg	11000	1700 U
Di-n-octyl phthalate	ug/kg	2514093	1700 U
Fluoranthene	ug/kg	423	1700 U
Fluorene	ug/kg	190	1700 U
Hexachlorobenzene	ug/kg	22699	1700 U
Hexachlorobutadiene	ug/kg	4977	1700 U
Hexachlorocyclopentadiene	ug/kg	10343	1700 U
Hexachloroethane	ug/kg	1000	1700 U
Indeno(1,2,3-cd)pyrene	ug/kg	200	1700 U
Isophorone	ug/kg	5490	1700 U
Naphthalene	ug/kg	176	**600 J**
Nitrobenzene	ug/kg	1739	1700 U
N-Nitrosodi-n-propylamine	ug/kg	-	1700 U
N-Nitrosodiphenylamine	ug/kg	7477	1700 U
Pentachlorophenol	ug/kg	6758	4400 U
Phenanthrene	ug/kg	204	1700 U
Phenol	ug/kg	31	1700 U
Pyrene	ug/kg	195	1700 U
Metals			
Aluminum	mg/kg	25500	16400 J
Antimony	mg/kg	2	1.9 UL
Arsenic	mg/kg	8.2	**15.9**
Barium	mg/kg	500	104 J
Beryllium	mg/kg	-	1.2
Cadmium	mg/kg	1.2	**2.8**

ANALYTICAL RESULTS SUMMARY
AOC 8 SEDIMENT SAMPLING
ALL DATA SCREENED TO SEDIMENT ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			***STATION-N***
Sample ID:			***SD-7462-120204-DJT-013***
Sample Date:			***12/2/2004***
Sample Depth:			***(0-0.5) ft bgs***
Parameters	***Units***	***Sediment ESV***	
Calcium	mg/kg	-	4570 J
Chromium Total	mg/kg	26	**78.6 J**
Cobalt	mg/kg	50	36.2 J
Copper	mg/kg	34	**43.2**
Iron	mg/kg	20000	**32500 J**
Lead	mg/kg	46.7	**52.8 J**
Magnesium	mg/kg	-	4850 J
Manganese	mg/kg	460	**2450 J**
Mercury~E1631	mg/kg	0.15	**27.091**
Mercury~SW7471	mg/kg	0.15	**47.0**
Methyl mercury	mg/kg	-	0.0176 J
Nickel	mg/kg	20.9	**46.2 J**
Potassium	mg/kg	-	2580 J
Selenium	mg/kg	1	**3.7 L**
Silver	mg/kg	1	0.40 U
Sodium	mg/kg	-	2420
Thallium	mg/kg	-	1.4 U
Vanadium	mg/kg	57	**72.8**
Zinc	mg/kg	150	**504 J**
General Chemistry			
Percent Moisture	%	-	81.0
Total Organic Carbon (TOC)	mg/kg	-	43700 J
Total Solids	%	-	18.1
Notes:			
B - Not detected substantially above the level reported in laboratory or field blanks.			
D - Compounds at secondary dilution factor.			
J - Estimated concentration.			
L - Low bias.			
N* - Sample recovery not within conrol limits.			
U - Not present at or above the associated value.			
UJ - Estimated reporting limit.			
UL - Not present at or above the associated value. Low bias.			
- Not analyzed.			

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:									*STATION-G*
Sample ID:									*SW-7462-120304-DJT-019*
Sample Date:									*12/3/2004*
			Number of	*Number of Detects*	*Maximum*	*Max Detected*	*Sample Date of*	*Number of Times*	
Parameters	*Units*	*Surface Water ESV*	*Samples*	*Above Criteria*	*Detected*	*Location*	*Max Detected*	*Above Standard*	
Volatile Organic Compounds									
1,2,4-Trichlorobenzene	ug/L	50	69	4	83 K	STATION-J	12/3/2004	1.66	2 U
1,2-Dichlorobenzene	ug/L	14	69	40	580 K	STATION-L	12/3/2004	41.43	2
1,3-Dichlorobenzene	ug/L	52	69	6	98 K	STATION-J	12/3/2004	1.88	2 U
1,4-Dichlorobenzene	ug/L	16	69	36	1200 K	STATION-L	12/3/2004	75.00	2.7
Benzene	ug/L	98	69	9	1400	STATION-Z	3/7/2008	14.29	0.7 U
Carbon disulfide	ug/L	0.92	69	1	2 B	STATION-J	8/15/2007	2.17	2 U
Carbon tetrachloride	ug/L	9.8	69	4	50 K	STATION-J	12/3/2004	5.10	**13**
Chlorobenzene	ug/L	64	69	27	2600	STATION-Z	3/7/2008	40.63	1 J
Metals									
Aluminum (Dissolved)	ug/L	87	18	1	108	STATION-G	12/3/2004	1.24	**108**
Cadmium (Dissolved)	ug/L	0.25	18	5	1.0 J	STATION-N	2/8/2008	4.00	0.40 U
Manganese (Dissolved)	ug/L	120	18	18	10200	STATION-L	2/8/2008	85.00	**253**
Mercury (Dissolved)	ug/L	0.77	69	13	5.4 L	STATION-G	12/3/2004	7.01	**5.4 L**
Silver (Dissolved)	ug/L	0.36	18	5	1.5 J	STATION-N	2/8/2008	4.17	0.40 U
General Chemistry									
Chloride	ug/L	230000	17	17	900000	STATION-H	3/6/2008	3.91	-

Notes:

B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*
Sample ID:			*WS-7462-032707-RM-09*	*SW-7462-051707-RM-24*	*SW-7462-051707-RM-25*	*SW-7462-081507-MJW-14*	*WS-7462-112007-RM-01*
Sample Date:			*3/27/2007*	*5/17/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*
					(Duplicate)		
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/L	52	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/L	16	1 U	1 U	1 U	1 U	1 U
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Carbon disulfide	ug/L	0.92	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	8.8	2	2	6	3.4
Chlorobenzene	ug/L	64	1 U	1 U	1 U	1 U	1 U
Metals							
Aluminum (Dissolved)	ug/L	87	-	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-	-
Manganese (Dissolved)	ug/L	120	-	-	-	-	-
Mercury (Dissolved)	ug/L	0.77	**3.8 L**	0.68	0.75	**1.2**	0.53
Silver (Dissolved)	ug/L	0.36	-	-	-	-	-
General Chemistry							
Chloride	ug/L	230000	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
J - Estimated concentration.							
K - High bias.							
L - Low bias.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-H*
Sample ID:			*SW-7462-020808-MJW-009*	*SW-7462-020808-MJW-010*	*SW-7462-030608-RM-01*	*SW-7462-120304-DJT-020*
Sample Date:			*2/8/2008*	*2/8/2008*	*3/6/2008*	*12/3/2004*
				(Duplicate)		
Parameters	*Units*	*Surface Water ESV*				
Volatile Organic Compounds						
1,2,4-Trichlorobenzene	ug/L	50	1 U	1 U	2	2 U
1,2-Dichlorobenzene	ug/L	14	1 U	1 U	3	3.3
1,3-Dichlorobenzene	ug/L	52	1 U	1 U	1 J	2 U
1,4-Dichlorobenzene	ug/L	16	1 U	1 U	2 B	5.3
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	0.7 U
Carbon disulfide	ug/L	0.92	1 U	1 U	2 U	2 U
Carbon tetrachloride	ug/L	9.8	5.2	6.8	4	4.4
Chlorobenzene	ug/L	64	1 U	1 U	2 U	3.5
Metals						
Aluminum (Dissolved)	ug/L	87	25.6 B	20.6 B	-	40.0
Cadmium (Dissolved)	ug/L	0.25	0.32 U	**0.47 J**	-	0.40 U
Manganese (Dissolved)	ug/L	120	**841**	**825**	-	**1000**
Mercury (Dissolved)	ug/L	0.77	**1.0**	**0.88**	**0.91**	**0.94 L**
Silver (Dissolved)	ug/L	0.36	0.41 U	0.41 U	-	0.40 U
General Chemistry						
Chloride	ug/L	230000	-	-	**696000**	-
Notes:						
B - Not detected substantially above the level reported in laboratory or field blanks.						
J - Estimated concentration.						
K - High bias.						
L - Low bias.						
U - Not present at or above the associated value.						
UJ - Estimated reporting limit.						
UL - Not present at or above the associated value. Low bias.						
- Not analyzed.						

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*
Sample ID:			*WS-7462-032707-RM-08*	*SW-7462-051707-RM-23*	*SW-7462-081507-MJW-13*	*WS-7462-112007-RM-02*	*SW-7462-020808-MJW-00*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	1.1	2	1 U	4.6	3.1
1,3-Dichlorobenzene	ug/L	52	1 U	1 U	1 U	1.2	1 U
1,4-Dichlorobenzene	ug/L	16	1 U	3	1 U	1.7	2.7
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Carbon disulfide	ug/L	0.92	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	1.4	1 U	5	4.6	4.9
Chlorobenzene	ug/L	64	1 U	2	1 U	1 U	1 U
Metals							
Aluminum (Dissolved)	ug/L	87	-	-	-	-	10.7 B
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-	0.32 U
Manganese (Dissolved)	ug/L	120	-	-	-	-	**1240**
Mercury (Dissolved)	ug/L	0.77	0.47 L	0.23	0.34	0.25	**0.80**
Silver (Dissolved)	ug/L	0.36	-	-	-	-	0.41 U
General Chemistry							
Chloride	ug/L	230000	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
J - Estimated concentration.							
K - High bias.							
L - Low bias.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-I*	*STATION-I*	*STATION-I*	*STATION-I*
Sample ID:			*SW-7462-030608-RM-11*	*SW-7462-120304-DJT-021*	*WS-7462-032707-RM-07*	*SW-7462-051707-RM-22*	*SW-7462-081507-MJW-12*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	2	7.7	2.0	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	11	**59**	**15**	4	1 U
1,3-Dichlorobenzene	ug/L	52	2	11	2.6	2	1 U
1,4-Dichlorobenzene	ug/L	16	6	**95**	1.9	8	1 U
Benzene	ug/L	98	0.7 U	6.1	0.7 U	0.7 U	0.7 U
Carbon disulfide	ug/L	0.92	2 U	2 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	9	2.8	1 U	1 U	2
Chlorobenzene	ug/L	64	2 U	**94**	1 U	6	1 U
Metals							
Aluminum (Dissolved)	ug/L	87	-	27.2	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	0.40 U	-	-	-
Manganese (Dissolved)	ug/L	120	-	**1750**	-	-	-
Mercury (Dissolved)	ug/L	0.77	**1.3**	0.10 UL	0.10 UL	0.13 J	0.10 U
Silver (Dissolved)	ug/L	0.36	-	0.40 U	-	-	-
General Chemistry							
Chloride	ug/L	230000	**900000**	-	-	-	-

Notes:

B - Not detected substantially above the level reported in laboratory or field blanks.

J - Estimated concentration.

K - High bias.

L - Low bias.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

UL - Not present at or above the associated value. Low bias.

- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-I*	*STATION-I*	*STATION-I*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-112007-RM-03*	*SW-7462-020808-MJW-007*	*SW-7462-030608-RM-13*	*SW-7462-120304-DJT-022*	*WS-7462-032707-RM-05*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	1 U	7.4	7	**83 K**	41 J
1,2-Dichlorobenzene	ug/L	14	14	**38**	**38**	**560 K**	**260**
1,3-Dichlorobenzene	ug/L	52	3.4	9.0	8	**98 K**	42 J
1,4-Dichlorobenzene	ug/L	16	3.9	**33**	**23**	**820 K**	**230 J**
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	39 K	9.9 J
Carbon disulfide	ug/L	0.92	1 U	1 U	2 U	2 U	1 U
Carbon tetrachloride	ug/L	9.8	1.5	1.9	2	**50 K**	3.0
Chlorobenzene	ug/L	64	1 U	7.3	3	**780 K**	**150 J**
Metals							
Aluminum (Dissolved)	ug/L	87	-	15.6 B	-	34.3	-
Cadmium (Dissolved)	ug/L	0.25	-	0.32 U	-	0.40 U	-
Manganese (Dissolved)	ug/L	120	-	**4030**	-	**4510**	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 U	0.10 U	0.10 UL	0.10 UL
Silver (Dissolved)	ug/L	0.36	-	0.41 U	-	0.40 U	-
General Chemistry							
Chloride	ug/L	230000	-	-	**432000**	-	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-032707-RM-06*	*SW-7462-051707-RM-21*	*SW-7462-081507-MJW-11*	*WS-7462-112007-RM-04*	*SW-7462-020808-MJW-006*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
			(Duplicate)				
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	19 J	4	1 U	3.8	23
1,2-Dichlorobenzene	ug/L	14	**160**	**15**	1 U	**79**	**120**
1,3-Dichlorobenzene	ug/L	52	22 J	6	1 U	14	26
1,4-Dichlorobenzene	ug/L	16	**94 J**	**30**	1 U	**89**	**160**
Benzene	ug/L	98	3.0 J	2	0.7 U	2.9	4.6
Carbon disulfide	ug/L	0.92	1 U	1 U	**2 B**	1 U	1 U
Carbon tetrachloride	ug/L	9.8	1.7	1 U	1 U	1.8	8.7
Chlorobenzene	ug/L	64	44 J	20	1 U	43	**96**
Metals							
Aluminum (Dissolved)	ug/L	87	-	-	-	-	20.3 B
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-	0.32 U
Manganese (Dissolved)	ug/L	120	-	-	-	-	**7220**
Mercury (Dissolved)	ug/L	0.77	0.10 UL	0.10 U	0.10 U	0.10 U	0.10 U
Silver (Dissolved)	ug/L	0.36	-	-	-	-	**0.96 J**
General Chemistry							
Chloride	ug/L	230000	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
J - Estimated concentration.							
K - High bias.							
L - Low bias.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-K*	*STATION-K*	*STATION-K*
Sample ID:			*SW-7462-030608-RM-15*	*SW-7462-120304-DJT-017*	*WS-7462-032707-RM-04*	*SW-7462-051707-RM-20*	*SW-7462-081507-MJW-10*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	19	40	45	10	28
1,2-Dichlorobenzene	ug/L	14	**110**	**310**	**390**	**57**	**170**
1,3-Dichlorobenzene	ug/L	52	21	50	48	17	42
1,4-Dichlorobenzene	ug/L	16	**110**	**470**	**590**	**88**	**240**
Benzene	ug/L	98	4	16	11	15	6
Carbon disulfide	ug/L	0.92	2 U	2 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	5	**20**	6.9	3	**15**
Chlorobenzene	ug/L	64	57	**430**	**500**	**88 L**	**97**
Metals							
Aluminum (Dissolved)	ug/L	87	-	38.7	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	0.40 U	-	-	-
Manganese (Dissolved)	ug/L	120	-	**3180**	-	-	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 UL	0.10 UL	0.12 J	0.10 U
Silver (Dissolved)	ug/L	0.36	-	0.40 U	-	-	-
General Chemistry							
Chloride	ug/L	230000	**488000**	-	-	-	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-K*	*STATION-K*	*STATION-K*	*STATION-L*	*STATION-L*
Sample ID:			*WS-7462-112007-RM-05*	*SW-7462-020808-MJW-005*	*SW-7462-030608-RM-17*	*SW-7462-120304-DJT-014*	*WS-7462-032707-RM-03*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	49	**52**	**56**	**58 K**	12
1,2-Dichlorobenzene	ug/L	14	**290**	**240**	**260**	**580 K**	**130**
1,3-Dichlorobenzene	ug/L	52	**55**	51	**61**	**98 K**	16
1,4-Dichlorobenzene	ug/L	16	**410**	**300**	**360**	**1200 K**	**130**
Benzene	ug/L	98	14	13	19	**380 K**	18
Carbon disulfide	ug/L	0.92	1 U	1 U	2 U	2 U	1 U
Carbon tetrachloride	ug/L	9.8	9.6	7.1	9	7.9 K	1 U
Chlorobenzene	ug/L	64	**280**	**170**	**310**	**1500 K**	**92**
Metals							
Aluminum (Dissolved)	ug/L	87	-	8.8 U	-	38.9	-
Cadmium (Dissolved)	ug/L	0.25	-	**0.38 J**	-	0.40 U	-
Manganese (Dissolved)	ug/L	120	-	**8070**	-	**4400**	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 U	0.10 U	0.10 UL	0.10 UL
Silver (Dissolved)	ug/L	0.36	-	**1.3 J**	-	0.40 U	-
General Chemistry							
Chloride	ug/L	230000	-	-	**571000**	-	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*
Sample ID:			*SW-7462-051707-RM-19*	*SW-7462-081507-MJW-09*	*WS-7462-112007-RM-06*	*SW-7462-020808-MJW-00*	*SW-7462-030608-RM-19*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/6/2008*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	8	6	3.5	29	12
1,2-Dichlorobenzene	ug/L	14	**75**	**130**	**97**	**280**	**120**
1,3-Dichlorobenzene	ug/L	52	24	30	20	43	21
1,4-Dichlorobenzene	ug/L	16	**170**	**150**	**54**	**440**	**160**
Benzene	ug/L	98	**120**	**190**	17	**110**	60
Carbon disulfide	ug/L	0.92	1 U	1 U	1 U	1 U	2 U
Carbon tetrachloride	ug/L	9.8	1 U	1 U	1.7	3.0	2
Chlorobenzene	ug/L	64	**660**	**690**	28	**430**	**150**
Metals							
Aluminum (Dissolved)	ug/L	87	-	-	-	8.8 U	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	0.32 U	-
Manganese (Dissolved)	ug/L	120	-	-	-	**10200**	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.13 J	0.10 U	0.10 U	0.10 U
Silver (Dissolved)	ug/L	0.36	-	-	-	**1.3 J**	-
General Chemistry							
Chloride	ug/L	230000	-	-	-	-	**501000**

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*
Sample ID:			*SW-7462-120304-DJT-015*	*SW-7462-120304-DJT-018*	*WS-7462-032707-RM-02*	*SW-7462-051707-RM-18*	*SW-7462-081507-MJW-08*
Sample Date:			*12/3/2004*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
				(Duplicate)			
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	13	13 K	3.6	1	1 U
1,2-Dichlorobenzene	ug/L	14	**150**	**150 K**	**74**	2	3
1,3-Dichlorobenzene	ug/L	52	33	33 K	9.2	6	3
1,4-Dichlorobenzene	ug/L	16	**320**	**330 K**	15	4	7
Benzene	ug/L	98	**160**	**170 K**	16	12	5
Carbon disulfide	ug/L	0.92	2 U	2 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	2.8	2.9 K	1 U	1 U	1 U
Chlorobenzene	ug/L	64	**580**	**590 K**	15	4	5
Metals							
Aluminum (Dissolved)	ug/L	87	32.7	35.6	-	-	-
Cadmium (Dissolved)	ug/L	0.25	0.40 U	0.40 U	-	-	-
Manganese (Dissolved)	ug/L	120	**2150**	**2070**	-	-	-
Mercury (Dissolved)	ug/L	0.77	0.10 UL	0.10 UL	0.10 UL	0.11 J	0.47
Silver (Dissolved)	ug/L	0.36	0.40 U	0.40 U	-	-	-
General Chemistry							
Chloride	ug/L	230000	-	-	-	-	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-N*	*STATION-N*
Sample ID:			*WS-7462-112007-RM-07*	*SW-7462-020808-MJW-003*	*SW-7462-030708-RM-31*	*SW-7462-120304-DJT-013*	*WS-7462-032707-RM-01*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/7/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	3.1	5.2	7	5.4	1.8
1,2-Dichlorobenzene	ug/L	14	**100**	**48**	**110**	**49**	**35**
1,3-Dichlorobenzene	ug/L	52	20	11	19	10	5.6
1,4-Dichlorobenzene	ug/L	16	**56**	**51**	**140**	**83**	2.5
Benzene	ug/L	98	45	36	**120**	43	2.5
Carbon disulfide	ug/L	0.92	1 U	1 U	2 U	2 U	1 U
Carbon tetrachloride	ug/L	9.8	1.7	1 U	2 U	1 J	1 U
Chlorobenzene	ug/L	64	**76**	48	**190**	**84**	1 U
Metals							
Aluminum (Dissolved)	ug/L	87	-	12.3 B	-	50.9	-
Cadmium (Dissolved)	ug/L	0.25	-	**0.39 J**	-	**0.60**	-
Manganese (Dissolved)	ug/L	120	-	**8680**	-	**2490**	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 U	0.10 U	0.17 L	0.10 UL
Silver (Dissolved)	ug/L	0.36	-	**1.2 J**	-	0.40 U	-
General Chemistry							
Chloride	ug/L	230000	-	-	**527000**	-	-

Notes:

B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*
Sample ID:			*SW-7462-051707-RM-17*	*SW-7462-081507-MJW-07*	*WS-7462-112007-RM-08*	*SW-7462-020808-MJW-002*	*SW-7462-030708-RM-33*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	1 U	1 U	2.2	2.2	2
1,2-Dichlorobenzene	ug/L	14	1	2	**73**	11	**20**
1,3-Dichlorobenzene	ug/L	52	5	2	15	5.2	6
1,4-Dichlorobenzene	ug/L	16	2	7	**17**	4.6	13
Benzene	ug/L	98	9	3	18	0.7 U	7
Carbon disulfide	ug/L	0.92	1 U	1 U	1 U	1 U	2 U
Carbon tetrachloride	ug/L	9.8	1 U	1 U	1.7	1 U	2 U
Chlorobenzene	ug/L	64	1	2	3.9	1.5	6
Metals							
Aluminum (Dissolved)	ug/L	87	-	-	-	32.3 B	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	**1.0 J**	-
Manganese (Dissolved)	ug/L	120	-	-	-	**7570**	-
Mercury (Dissolved)	ug/L	0.77	0.10 J	0.10 U	0.10 U	0.10 U	0.10 U
Silver (Dissolved)	ug/L	0.36	-	-	-	**1.5 J**	-
General Chemistry							
Chloride	ug/L	230000	-	-	-	-	**515000**

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-S*	*STATION-T*	*STATION-U*	*STATION-V*	*STATION-W*
Sample ID:			*SW-7462-030608-RM-03*	*SW-7462-030608-RM-05*	*SW-7462-030608-RM-07*	*SW-7462-030608-RM-09*	*SW-7462-030708-RM-21*
Sample Date:			*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,2,4-Trichlorobenzene	ug/L	50	2 U	2 U	1 J	1 J	40
1,2-Dichlorobenzene	ug/L	14	3	1 J	5	6	**210**
1,3-Dichlorobenzene	ug/L	52	2 U	2 U	1 J	1 J	**74**
1,4-Dichlorobenzene	ug/L	16	1 B	2 U	2 B	3 B	**260**
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	0.7 U	18
Carbon disulfide	ug/L	0.92	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	ug/L	9.8	7	5	4	7	3
Chlorobenzene	ug/L	64	2 U	2 U	2 U	2 U	**290**
Metals							
Aluminum (Dissolved)	ug/L	87	-	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-	-
Manganese (Dissolved)	ug/L	120	-	-	-	-	-
Mercury (Dissolved)	ug/L	0.77	**1.3**	**3.4**	**1.9**	**1.7**	0.10 U
Silver (Dissolved)	ug/L	0.36	-	-	-	-	-
General Chemistry							
Chloride	ug/L	230000	**455000**	**560000**	**597000**	**830000**	**684000**
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
J - Estimated concentration.							
K - High bias.							
L - Low bias.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
STATS SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-X*	*STATION-X*	*STATION-Y*	*STATION-Z*
Sample ID:			*SW-7462-030708-RM-23*	*SW-7462-030708-RM-25*	*SW-7462-030708-RM-27*	*SW-7462-030708-RM-29*
Sample Date:			*3/7/2008*	*3/7/2008*	*3/7/2008*	*3/7/2008*
				(Duplicate)		
Parameters	*Units*	*Surface Water ESV*				
Volatile Organic Compounds						
1,2,4-Trichlorobenzene	ug/L	50	24	26	8	6
1,2-Dichlorobenzene	ug/L	14	**170**	**170**	**120**	**170**
1,3-Dichlorobenzene	ug/L	52	33	33	20	**53**
1,4-Dichlorobenzene	ug/L	16	**190**	**190**	**150**	**360**
Benzene	ug/L	98	24	25	**130**	**1400**
Carbon disulfide	ug/L	0.92	2 U	2 U	2 U	2 U
Carbon tetrachloride	ug/L	9.8	4	4	2 U	2 U
Chlorobenzene	ug/L	64	**110**	**120**	**180**	**2600**
Metals						
Aluminum (Dissolved)	ug/L	87	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-
Manganese (Dissolved)	ug/L	120	-	-	-	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 U	0.10 U	0.10 U
Silver (Dissolved)	ug/L	0.36	-	-	-	-
General Chemistry						
Chloride	ug/L	230000	**543000**	**545000**	**523000**	**529000**
Notes:						
B - Not detected substantially above the level reported in laboratory or field blanks.						
J - Estimated concentration.						
K - High bias.						
L - Low bias.						
U - Not present at or above the associated value.						
UJ - Estimated reporting limit.						
UL - Not present at or above the associated value. Low bias.						
- Not analyzed.						

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*
Sample ID:			*SW-7462-120304-DJT-019*	*WS-7462-032707-RM-09*	*SW-7462-051707-RM-24*	*SW-7462-051707-RM-25*	*SW-7462-081507-MJW-14*
Sample Date:			*12/3/2004*	*3/27/2007*	*5/17/2007*	*5/17/2007*	*8/15/2007*
						(Duplicate)	
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	2 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	2 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	87	2 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	740	2 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	25	2 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	2 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	2 UL	1 U	1 U	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	2 UL	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	2	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/L	980	2 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	525	2 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/L	52	2 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/L	16	2.7	1 U	1 U	1 U	1 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	5 U	5 U	5 U	3 J	3 B
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Bromodichloromethane	ug/L	110	2 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	320	2 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	2 U	1 U	1 UL	1 UL	1 U
Carbon disulfide	ug/L	0.92	2 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	**13**	8.8	2	2	6
Chlorobenzene	ug/L	64	1 J	1 U	1 U	1 U	1 U
Chloroethane	ug/L	-	2 U	1 U	1 U	1 U	1 U
Chloroform (Trichloromethane)	ug/L	28	18	6.1	2	2	4
Chloromethane (Methyl Chloride)	ug/L	5500	2 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/L	590	2 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	2 U	1 U	1 U	1 U	1 U
Cyclohexane	ug/L	-	2 U	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/L	110	2 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	2 UL	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	110	2 U	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/L	-	2 U	1 U	1 U	1 U	1 U
Methyl acetate	ug/L	-	2 U	1 U	1 U	1 U	1 U
Methyl cyclohexane	ug/L	-	2 U	1 U	1 U	1 U	1 U
Methyl Tert Butyl Ether	ug/L	-	2 U	1 U	1 U	1 U	1 U
Methylene chloride	ug/L	1500	16 B	1 U	1 U	1 U	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*
Sample ID:			*SW-7462-120304-DJT-019*	*WS-7462-032707-RM-09*	*SW-7462-051707-RM-24*	*SW-7462-051707-RM-25*	*SW-7462-081507-MJW-14*
Sample Date:			*12/3/2004*	*3/27/2007*	*5/17/2007*	*5/17/2007*	*8/15/2007*
						(Duplicate)	
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	2 U	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/L	60	11	12	8	8	8
Toluene	ug/L	94	2 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	2 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/L	244	2 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	47	2 U	1.1	1 U	1 U	1 U
Trichlorofluoromethane (CFC-11)	ug/L	110	2 U	1 U	1 U	1 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	2 U	1 U	1 U	1 U	1 U
Vinyl chloride	ug/L	930	2 U	1 U	1 U	1 U	1 U
Xylene (total)	ug/L	13	2 U	1 U	1 U	1 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	10 U	-	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	25 U	-	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	10 U	-	-	-	-
2,4-Dichlorophenol	ug/L	17	10 U	-	-	-	-
2,4-Dimethylphenol	ug/L	21	10 U	-	-	-	-
2,4-Dinitrophenol	ug/L	6	25 U	-	-	-	-
2,4-Dinitrotoluene	ug/L	230	10 U	-	-	-	-
2,6-Dinitrotoluene	ug/L	60	10 U	-	-	-	-
2-Chloronaphthalene	ug/L	16	10 U	-	-	-	-
2-Chlorophenol	ug/L	44	10 U	-	-	-	-
2-Methylnaphthalene	ug/L	14.2	10 U	-	-	-	-
2-Methylphenol	ug/L	13	10 U	-	-	-	-
2-Nitroaniline	ug/L	49	25 U	-	-	-	-
2-Nitrophenol	ug/L	73	10 U	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	10 U	-	-	-	-
3-Nitroaniline	ug/L	9.8	25 U	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	25 U	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	10 U	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	10 U	-	-	-	-
4-Chloroaniline	ug/L	10	10 U	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	10 U	-	-	-	-
4-Methylphenol	ug/L	-	10 UL	-	-	-	-
4-Nitroaniline	ug/L	-	25 U	-	-	-	-
4-Nitrophenol	ug/L	58	25 U	-	-	-	-
Acenaphthene	ug/L	23	10 U	-	-	-	-
Acenaphthylene	ug/L	-	10 U	-	-	-	-
Acetophenone	ug/L	-	10 U	-	-	-	-
Anthracene	ug/L	0.73	10 U	-	-	-	-
Atrazine	ug/L	-	10 U	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*
Sample ID:			*SW-7462-120304-DJT-019*	*WS-7462-032707-RM-09*	*SW-7462-051707-RM-24*	*SW-7462-051707-RM-25*	*SW-7462-081507-MJW-14*
Sample Date:			*12/3/2004*	*3/27/2007*	*5/17/2007*	*5/17/2007*	*8/15/2007*
						(Duplicate)	
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	10 UJ	-	-	-	-
Benzo(a)anthracene	ug/L	0.025	10 U	-	-	-	-
Benzo(a)pyrene	ug/L	0.014	10 U	-	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	10 U	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	10 U	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	10 U	-	-	-	-
Biphenyl	ug/L	-	10 U	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	10 U	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	10 U	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	10 U	-	-	-	-
Butyl benzylphthalate	ug/L	22	10 U	-	-	-	-
Caprolactam	ug/L	-	10 U	-	-	-	-
Carbazole	ug/L	9.3	10 U	-	-	-	-
Chrysene	ug/L	-	10 U	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	10 U	-	-	-	-
Dibenzofuran	ug/L	3.7	10 U	-	-	-	-
Diethyl phthalate	ug/L	220	10 U	-	-	-	-
Dimethyl phthalate	ug/L	330	10 U	-	-	-	-
Di-n-butylphthalate	ug/L	33	10 U	-	-	-	-
Di-n-octyl phthalate	ug/L	3	10 U	-	-	-	-
Fluoranthene	ug/L	3.6	10 U	-	-	-	-
Fluorene	ug/L	2.4	10 U	-	-	-	-
Hexachlorobenzene	ug/L	3.68	10 U	-	-	-	-
Hexachlorobutadiene	ug/L	9.3	10 U	-	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	10 U	-	-	-	-
Hexachloroethane	ug/L	12	10 U	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	10 U	-	-	-	-
Isophorone	ug/L	830	10 U	-	-	-	-
Naphthalene	ug/L	12	10 U	-	-	-	-
Nitrobenzene	ug/L	220	10 U	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	10 U	-	-	-	-
N-Nitrosodiphenylamine	ug/L	25	10 U	-	-	-	-
Pentachlorophenol	ug/L	6.7	25 U	-	-	-	-
Phenanthrene	ug/L	0.93	10 U	-	-	-	-
Phenol	ug/L	110	10 U	-	-	-	-
Pyrene	ug/L	-	10 U	-	-	-	-
Metals							
Aluminum	ug/L	-	695 K	-	-	-	-
Aluminum (Dissolved)	ug/L	87	**108**	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*
Sample ID:			*SW-7462-120304-DJT-019*	*WS-7462-032707-RM-09*	*SW-7462-051707-RM-24*	*SW-7462-051707-RM-25*	*SW-7462-081507-MJW-14*
Sample Date:			*12/3/2004*	*3/27/2007*	*5/17/2007*	*5/17/2007*	*8/15/2007*
						(Duplicate)	
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	3.3 U	-	-	-	-
Antimony (Dissolved)	ug/L	30	3.3 U	-	-	-	-
Arsenic	ug/L	-	7.3 J	-	-	-	-
Arsenic (Dissolved)	ug/L	150	7.7	-	-	-	-
Barium	ug/L	-	77.5	-	-	-	-
Barium (Dissolved)	ug/L	438	70.6	-	-	-	-
Beryllium	ug/L	-	0.20 U	-	-	-	-
Beryllium (Dissolved)	ug/L	2.4	0.20 U	-	-	-	-
Cadmium	ug/L	-	0.53 B	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	0.40 U	-	-	-	-
Calcium	ug/L	-	44300	-	-	-	-
Calcium (Dissolved)	ug/L	-	40500	-	-	-	-
Chromium Total	ug/L	-	7.2 B	-	-	-	-
Chromium Total (Dissolved)	ug/L	11	3.1	-	-	-	-
Cobalt	ug/L	-	2.4	-	-	-	-
Cobalt (Dissolved)	ug/L	23	2.0 U	-	-	-	-
Copper	ug/L	-	1.1	-	-	-	-
Copper (Dissolved)	ug/L	9	1.6	-	-	-	-
Iron	ug/L	-	364	-	-	-	-
Iron (Dissolved)	ug/L	320	25.3	-	-	-	-
Lead	ug/L	-	1.4 U	-	-	-	-
Lead (Dissolved)	ug/L	2.5	1.4 U	-	-	-	-
Magnesium	ug/L	-	32600	-	-	-	-
Magnesium (Dissolved)	ug/L	-	29300	-	-	-	-
Manganese	ug/L	-	330	-	-	-	-
Manganese (Dissolved)	ug/L	120	**253**	-	-	-	-
Mercury (Dissolved)	ug/L	0.77	**5.4 L**	**3.8 L**	0.68	0.75	**1.2**
Mercury~E1631	ug/L	-	38.3	-	-	-	-
Mercury~SW7470	ug/L	-	20.3 J	18.7	4.6	7.2	18.2
Nickel	ug/L	-	3.1	-	-	-	-
Nickel (Dissolved)	ug/L	52	2.1	-	-	-	-
Potassium	ug/L	-	118000 J	-	-	-	-
Potassium (Dissolved)	ug/L	-	105000	-	-	-	-
Selenium	ug/L	-	2.4 UL	-	-	-	-
Selenium (Dissolved)	ug/L	4.6	4.3	-	-	-	-
Silver	ug/L	-	0.40 U	-	-	-	-
Silver (Dissolved)	ug/L	0.36	0.40 U	-	-	-	-
Sodium	ug/L	-	760000	-	-	-	-
Sodium (Dissolved)	ug/L	-	698000	-	-	-	-
Thallium	ug/L	-	3.1 U	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*
Sample ID:			*SW-7462-120304-DJT-019*	*WS-7462-032707-RM-09*	*SW-7462-051707-RM-24*	*SW-7462-051707-RM-25*	*SW-7462-081507-MJW-14*
Sample Date:			*12/3/2004*	*3/27/2007*	*5/17/2007*	*5/17/2007*	*8/15/2007*
						(Duplicate)	
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	3.1 U	-	-	-	-
Vanadium	ug/L	-	12.2	-	-	-	-
Vanadium (Dissolved)	ug/L	12	8.7	-	-	-	-
Zinc	ug/L	-	70.4	-	-	-	-
Zinc (Dissolved)	ug/L	118.1	65.4	-	-	-	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	-	-	-
Carbonate	ug/L	-	-	-	-	-	-
Chloride	ug/L	230000	-	-	-	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	2700	-	-	-	-
Sulfate	ug/L	-	-	-	-	-	-
Total Organic Carbon (TOC)	ug/L	-	2500	-	-	-	-
Total Suspended Solids (TSS)	ug/L	-	8000	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
J - Estimated concentration.							
K - High bias.							
L - Low bias.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							
Only dissolved metals were screened.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-H*
Sample ID:			*WS-7462-112007-RM-01*	*SW-7462-020808-MJW-009*	*SW-7462-020808-MJW-010*	*SW-7462-030608-RM-01*	*SW-7462-120304-DJT-020*
Sample Date:			*11/20/2007*	*2/8/2008*	*2/8/2008*	*3/6/2008*	*12/3/2004*
					(Duplicate)		
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	1 U	1 U	1 U	2 U	2 U
1,1,2,2-Tetrachloroethane	ug/L	2400	1 U	1 U	1 U	2 U	2 U
1,1,2-Trichloroethane	ug/L	87	1 U	1 U	1 U	2 U	2 U
1,1-Dichloroethane	ug/L	740	1 U	1 U	1 U	2 U	2 U
1,1-Dichloroethene	ug/L	25	1 U	1 U	1 U	2 U	2 U
1,2,4-Trichlorobenzene	ug/L	50	1 U	1 U	1 U	2	2 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	1 U	1 U	1 U	2 U	2 UL
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	1 U	1 U	1 U	2 U	2 UL
1,2-Dichlorobenzene	ug/L	14	1 U	1 U	1 U	3	3.3
1,2-Dichloroethane	ug/L	980	1 U	1 U	1 U	2 U	2 U
1,2-Dichloropropane	ug/L	525	1 U	1 U	1 U	2 U	2 U
1,3-Dichlorobenzene	ug/L	52	1 U	1 U	1 U	1 J	2 U
1,4-Dichlorobenzene	ug/L	16	1 U	1 U	1 U	2 B	5.3
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	5 U	5 U	5 U	2 J	5 U
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Bromodichloromethane	ug/L	110	1 U	1 U	1 U	2 U	2 U
Bromoform	ug/L	320	1 U	1 U	1 U	2 U	2 U
Bromomethane (Methyl Bromide)	ug/L	110	1 U	1 U	1 U	2 U	2 U
Carbon disulfide	ug/L	0.92	1 U	1 U	1 U	2 U	2 U
Carbon tetrachloride	ug/L	9.8	3.4	5.2	6.8	4	4.4
Chlorobenzene	ug/L	64	1 U	1 U	1 U	2 U	3.5
Chloroethane	ug/L	-	1 U	1 U	1 U	2 U	2 U
Chloroform (Trichloromethane)	ug/L	28	2.1	3.7	4.8	2	6.5
Chloromethane (Methyl Chloride)	ug/L	5500	1 U	1 U	1 U	2 U	2 U
cis-1,2-Dichloroethene	ug/L	590	1 U	1 U	1 U	2 U	2 U
cis-1,3-Dichloropropene	ug/L	0.055	1 U	1 U	1 U	2 U	2 U
Cyclohexane	ug/L	-	1 U	1 U	1 U	2 U	2 U
Dibromochloromethane	ug/L	110	1 U	1 U	1 U	2 U	2 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	1 U	1 U	1 U	2 U	2 UL
Ethylbenzene	ug/L	110	1 U	1 U	1 U	2 U	2 U
Isopropylbenzene	ug/L	-	1 U	1 U	1 U	2 U	2 U
Methyl acetate	ug/L	-	1 U	1 U	1 U	2 U	2 U
Methyl cyclohexane	ug/L	-	1 U	1 U	1 U	2 U	2 U
Methyl Tert Butyl Ether	ug/L	-	1 U	1 U	1 U	2 U	1 J
Methylene chloride	ug/L	1500	1 U	1 U	1 U	2 U	6 B

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-H*
Sample ID:			*WS-7462-112007-RM-01*	*SW-7462-020808-MJW-009*	*SW-7462-020808-MJW-010*	*SW-7462-030608-RM-01*	*SW-7462-120304-DJT-020*
Sample Date:			*11/20/2007*	*2/8/2008*	*2/8/2008*	*3/6/2008*	*12/3/2004*
					(Duplicate)		
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	1 U	1 U	1 U	2 U	2 U
Tetrachloroethene	ug/L	60	15	7.5	8.1	7	4.9
Toluene	ug/L	94	1 U	1 U	1 U	2 U	2 U
trans-1,2-Dichloroethene	ug/L	1160	1 U	1 U	1 U	2 U	2 U
trans-1,3-Dichloropropene	ug/L	244	1 U	1 U	1 U	2 U	2 U
Trichloroethene	ug/L	47	1.1	1 U	1 U	2 U	2 U
Trichlorofluoromethane (CFC-11)	ug/L	110	1 U	1 U	1 U	2 U	2 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	1 U	1 U	1 U	2 U	2 U
Vinyl chloride	ug/L	930	1 U	1 U	1 U	2 U	2 U
Xylene (total)	ug/L	13	1 U	1 U	1 U	2 U	2 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	-	10 U
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	-	25 U
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	-	10 U
2,4-Dichlorophenol	ug/L	17	-	-	-	-	10 U
2,4-Dimethylphenol	ug/L	21	-	-	-	-	10 U
2,4-Dinitrophenol	ug/L	6	-	-	-	-	25 U
2,4-Dinitrotoluene	ug/L	230	-	-	-	-	10 U
2,6-Dinitrotoluene	ug/L	60	-	-	-	-	10 U
2-Chloronaphthalene	ug/L	16	-	-	-	-	10 U
2-Chlorophenol	ug/L	44	-	-	-	-	10 U
2-Methylnaphthalene	ug/L	14.2	-	-	-	-	10 U
2-Methylphenol	ug/L	13	-	-	-	-	10 U
2-Nitroaniline	ug/L	49	-	-	-	-	25 U
2-Nitrophenol	ug/L	73	-	-	-	-	10 U
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	-	10 U
3-Nitroaniline	ug/L	9.8	-	-	-	-	25 U
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	-	25 U
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	-	10 U
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	-	10 U
4-Chloroaniline	ug/L	10	-	-	-	-	10 U
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-	10 U
4-Methylphenol	ug/L	-	-	-	-	-	10 UL
4-Nitroaniline	ug/L	-	-	-	-	-	25 U
4-Nitrophenol	ug/L	58	-	-	-	-	25 U
Acenaphthene	ug/L	23	-	-	-	-	10 U
Acenaphthylene	ug/L	-	-	-	-	-	10 U
Acetophenone	ug/L	-	-	-	-	-	10 U
Anthracene	ug/L	0.73	-	-	-	-	10 U
Atrazine	ug/L	-	-	-	-	-	10 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-H*
Sample ID:			*WS-7462-112007-RM-01*	*SW-7462-020808-MJW-009*	*SW-7462-020808-MJW-010*	*SW-7462-030608-RM-01*	*SW-7462-120304-DJT-020*
Sample Date:			*11/20/2007*	*2/8/2008*	*2/8/2008*	*3/6/2008*	*12/3/2004*
					(Duplicate)		
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	-	10 UJ
Benzo(a)anthracene	ug/L	0.025	-	-	-	-	10 U
Benzo(a)pyrene	ug/L	0.014	-	-	-	-	10 U
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	-	10 U
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-	10 U
Benzo(k)fluoranthene	ug/L	-	-	-	-	-	10 U
Biphenyl	ug/L	-	-	-	-	-	10 U
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	-	10 U
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	-	10 U
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	-	10 U
Butyl benzylphthalate	ug/L	22	-	-	-	-	10 U
Caprolactam	ug/L	-	-	-	-	-	10 U
Carbazole	ug/L	9.3	-	-	-	-	10 U
Chrysene	ug/L	-	-	-	-	-	10 U
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-	10 U
Dibenzofuran	ug/L	3.7	-	-	-	-	10 U
Diethyl phthalate	ug/L	220	-	-	-	-	10 U
Dimethyl phthalate	ug/L	330	-	-	-	-	10 U
Di-n-butylphthalate	ug/L	33	-	-	-	-	10 U
Di-n-octyl phthalate	ug/L	3	-	-	-	-	10 U
Fluoranthene	ug/L	3.6	-	-	-	-	10 U
Fluorene	ug/L	2.4	-	-	-	-	10 U
Hexachlorobenzene	ug/L	3.68	-	-	-	-	10 U
Hexachlorobutadiene	ug/L	9.3	-	-	-	-	10 U
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	-	10 U
Hexachloroethane	ug/L	12	-	-	-	-	10 U
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-	10 U
Isophorone	ug/L	830	-	-	-	-	10 U
Naphthalene	ug/L	12	-	-	-	-	10 U
Nitrobenzene	ug/L	220	-	-	-	-	10 U
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-	10 U
N-Nitrosodiphenylamine	ug/L	25	-	-	-	-	10 U
Pentachlorophenol	ug/L	6.7	-	-	-	-	25 U
Phenanthrene	ug/L	0.93	-	-	-	-	10 U
Phenol	ug/L	110	-	-	-	-	10 U
Pyrene	ug/L	-	-	-	-	-	10 U
Metals							
Aluminum	ug/L	-	-	-	-	-	1010 K
Aluminum (Dissolved)	ug/L	87	-	25.6 B	20.6 B	-	40.0

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-H*
Sample ID:			*WS-7462-112007-RM-01*	*SW-7462-020808-MJW-009*	*SW-7462-020808-MJW-010*	*SW-7462-030608-RM-01*	*SW-7462-120304-DJT-020*
Sample Date:			*11/20/2007*	*2/8/2008*	*2/8/2008*	*3/6/2008*	*12/3/2004*
					(Duplicate)		
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	-	3.3 U
Antimony (Dissolved)	ug/L	30	-	2.3 U	2.3 U	-	3.3 U
Arsenic	ug/L	-	-	-	-	-	7.5 J
Arsenic (Dissolved)	ug/L	150	-	1.8 U	1.8 U	-	5.4
Barium	ug/L	-	-	-	-	-	52.0
Barium (Dissolved)	ug/L	438	-	48.8 J	47.6 J	-	51.7
Beryllium	ug/L	-	-	-	-	-	0.20 U
Beryllium (Dissolved)	ug/L	2.4	-	0.18 U	0.18 U	-	0.20 U
Cadmium	ug/L	-	-	-	-	-	0.40 U
Cadmium (Dissolved)	ug/L	0.25	-	0.32 U	**0.47 J**	-	0.40 U
Calcium	ug/L	-	-	-	-	19100	45400
Calcium (Dissolved)	ug/L	-	-	20100	19900	-	47400
Chromium Total	ug/L	-	-	-	-	-	5.4 B
Chromium Total (Dissolved)	ug/L	11	-	8.7 J	8.4 J	-	1.5
Cobalt	ug/L	-	-	-	-	-	2.2
Cobalt (Dissolved)	ug/L	23	-	1.5 J	1.5 J	-	2.4
Copper	ug/L	-	-	-	-	-	1.3
Copper (Dissolved)	ug/L	9	-	0.97 B	1.3 B	-	1.3
Iron	ug/L	-	-	-	-	-	853
Iron (Dissolved)	ug/L	320	-	71.8 B	24 U	-	65.4
Lead	ug/L	-	-	-	-	-	1.4 U
Lead (Dissolved)	ug/L	2.5	-	1.4 U	1.5 B	-	1.4 U
Magnesium	ug/L	-	-	-	-	-	41000
Magnesium (Dissolved)	ug/L	-	-	18300	18100	-	42200
Manganese	ug/L	-	-	-	-	739	1040
Manganese (Dissolved)	ug/L	120	-	**841**	**825**	-	**1000**
Mercury (Dissolved)	ug/L	0.77	0.53	**1.0**	**0.88**	**0.91**	**0.94 L**
Mercury~E1631	ug/L	-	-	-	-	-	21.4
Mercury~SW7470	ug/L	-	4.8	7.9	11.6	7.2	18.8 J
Nickel	ug/L	-	-	-	-	-	4.9
Nickel (Dissolved)	ug/L	52	-	3.2 J	2.6 J	-	4.8
Potassium	ug/L	-	-	-	-	112000	56500 J
Potassium (Dissolved)	ug/L	-	-	133000	124000	-	62500
Selenium	ug/L	-	-	-	-	-	2.7 J
Selenium (Dissolved)	ug/L	4.6	-	2.4 U	2.4 U	-	2.4 U
Silver	ug/L	-	-	-	-	-	0.40 U
Silver (Dissolved)	ug/L	0.36	-	0.41 U	0.41 U	-	0.40 U
Sodium	ug/L	-	-	-	-	438000	507000
Sodium (Dissolved)	ug/L	-	-	507000	476000	-	548000
Thallium	ug/L	-	-	-	-	-	3.1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-G*	*STATION-G*	*STATION-G*	*STATION-G*	*STATION-H*
Sample ID:			*WS-7462-112007-RM-01*	*SW-7462-020808-MJW-009*	*SW-7462-020808-MJW-010*	*SW-7462-030608-RM-01*	*SW-7462-120304-DJT-020*
Sample Date:			*11/20/2007*	*2/8/2008*	*2/8/2008*	*3/6/2008*	*12/3/2004*
					(Duplicate)		
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	2.3 U	2.3 U	-	4.3
Vanadium	ug/L	-	-	-	-	-	7.0
Vanadium (Dissolved)	ug/L	12	-	1.2 J	1.3 J	-	3.4
Zinc	ug/L	-	-	-	-	-	62.5
Zinc (Dissolved)	ug/L	118.1	-	10.1 B	18.8 B	-	53.8
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	-	85800	-
Carbonate	ug/L	-	-	-	-	1000 U	-
Chloride	ug/L	230000	-	-	-	696000	-
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	-	3400
Sulfate	ug/L	-	-	-	-	128000	-
Total Organic Carbon (TOC)	ug/L	-	-	-	-	-	3700
Total Suspended Solids (TSS)	ug/L	-	-	-	-	4000	22000

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*
Sample ID:			*WS-7462-032707-RM-08*	*SW-7462-051707-RM-23*	*SW-7462-081507-MJW-13*	*WS-7462-112007-RM-02*	*SW-7462-020808-MJW-008*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	87	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	740	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	25	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	1.1	2	1 U	4.6	3.1
1,2-Dichloroethane	ug/L	980	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	525	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/L	52	1 U	1 U	1 U	1.2	1 U
1,4-Dichlorobenzene	ug/L	16	1 U	3	1 U	1.7	2.7
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	5 U	4 J	4 B	5 U	5 U
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Bromodichloromethane	ug/L	110	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	320	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	1 U	1 UL	1 U	1 U	1 U
Carbon disulfide	ug/L	0.92	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	1.4	1 U	5	4.6	4.9
Chlorobenzene	ug/L	64	1 U	2	1 U	1 U	1 U
Chloroethane	ug/L	-	1 U	1 U	1 U	1 U	1 U
Chloroform (Trichloromethane)	ug/L	28	1.6	1 U	4	4.2	3.7
Chloromethane (Methyl Chloride)	ug/L	5500	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/L	590	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	1 U	1 U	1 U	1 U	1 U
Cyclohexane	ug/L	-	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/L	110	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	110	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/L	-	1 U	1 U	1 U	1 U	1 U
Methyl acetate	ug/L	-	1 U	1 U	1 U	1 U	1 U
Methyl cyclohexane	ug/L	-	1 U	1 U	1 U	1 U	1 U
Methyl Tert Butyl Ether	ug/L	-	1 U	1 U	1 U	1 U	1 U
Methylene chloride	ug/L	1500	1 U	1 U	1 U	1 U	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*
Sample ID:			*WS-7462-032707-RM-08*	*SW-7462-051707-RM-23*	*SW-7462-081507-MJW-13*	*WS-7462-112007-RM-02*	*SW-7462-020808-MJW-008*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/L	60	3.7	2	4	5.6	5.7
Toluene	ug/L	94	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/L	244	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	47	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane (CFC-11)	ug/L	110	1 U	1 U	1 U	1 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	ug/L	930	1 U	1 U	1 U	1 U	1 U
Xylene (total)	ug/L	13	1 U	1 U	1 U	1 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	-	-
2,4-Dichlorophenol	ug/L	17	-	-	-	-	-
2,4-Dimethylphenol	ug/L	21	-	-	-	-	-
2,4-Dinitrophenol	ug/L	6	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	-	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	-	-
2-Chloronaphthalene	ug/L	16	-	-	-	-	-
2-Chlorophenol	ug/L	44	-	-	-	-	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	-	-
2-Methylphenol	ug/L	13	-	-	-	-	-
2-Nitroaniline	ug/L	49	-	-	-	-	-
2-Nitrophenol	ug/L	73	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	-	-
3-Nitroaniline	ug/L	9.8	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	-	-
4-Chloroaniline	ug/L	10	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-	-
4-Methylphenol	ug/L	-	-	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-	-	-
4-Nitrophenol	ug/L	58	-	-	-	-	-
Acenaphthene	ug/L	23	-	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-	-	-
Acetophenone	ug/L	-	-	-	-	-	-
Anthracene	ug/L	0.73	-	-	-	-	-
Atrazine	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*
Sample ID:			*WS-7462-032707-RM-08*	*SW-7462-051707-RM-23*	*SW-7462-081507-MJW-13*	*WS-7462-112007-RM-02*	*SW-7462-020808-MJW-008*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	-	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	-	-
Biphenyl	ug/L	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	-	-
Butyl benzylphthalate	ug/L	22	-	-	-	-	-
Caprolactam	ug/L	-	-	-	-	-	-
Carbazole	ug/L	9.3	-	-	-	-	-
Chrysene	ug/L	-	-	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-	-
Dibenzofuran	ug/L	3.7	-	-	-	-	-
Diethyl phthalate	ug/L	220	-	-	-	-	-
Dimethyl phthalate	ug/L	330	-	-	-	-	-
Di-n-butylphthalate	ug/L	33	-	-	-	-	-
Di-n-octyl phthalate	ug/L	3	-	-	-	-	-
Fluoranthene	ug/L	3.6	-	-	-	-	-
Fluorene	ug/L	2.4	-	-	-	-	-
Hexachlorobenzene	ug/L	3.68	-	-	-	-	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	-	-
Hexachloroethane	ug/L	12	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-	-
Isophorone	ug/L	830	-	-	-	-	-
Naphthalene	ug/L	12	-	-	-	-	-
Nitrobenzene	ug/L	220	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	-	-
Pentachlorophenol	ug/L	6.7	-	-	-	-	-
Phenanthrene	ug/L	0.93	-	-	-	-	-
Phenol	ug/L	110	-	-	-	-	-
Pyrene	ug/L	-	-	-	-	-	-
Metals							
Aluminum	ug/L	-	-	-	-	-	-
Aluminum (Dissolved)	ug/L	87	-	-	-	-	10.7 B

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*
Sample ID:			*WS-7462-032707-RM-08*	*SW-7462-051707-RM-23*	*SW-7462-081507-MJW-13*	*WS-7462-112007-RM-02*	*SW-7462-020808-MJW-008*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	-	-
Antimony (Dissolved)	ug/L	30	-	-	-	-	2.3 U
Arsenic	ug/L	-	-	-	-	-	-
Arsenic (Dissolved)	ug/L	150	-	-	-	-	1.8 U
Barium	ug/L	-	-	-	-	-	-
Barium (Dissolved)	ug/L	438	-	-	-	-	48.2 J
Beryllium	ug/L	-	-	-	-	-	-
Beryllium (Dissolved)	ug/L	2.4	-	-	-	-	0.18 U
Cadmium	ug/L	-	-	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-	0.32 U
Calcium	ug/L	-	-	-	-	-	-
Calcium (Dissolved)	ug/L	-	-	-	-	-	22100
Chromium Total	ug/L	-	-	-	-	-	-
Chromium Total (Dissolved)	ug/L	11	-	-	-	-	4.0 B
Cobalt	ug/L	-	-	-	-	-	-
Cobalt (Dissolved)	ug/L	23	-	-	-	-	1.9 J
Copper	ug/L	-	-	-	-	-	-
Copper (Dissolved)	ug/L	9	-	-	-	-	1.6 B
Iron	ug/L	-	-	-	-	-	-
Iron (Dissolved)	ug/L	320	-	-	-	-	24.2 U
Lead	ug/L	-	-	-	-	-	-
Lead (Dissolved)	ug/L	2.5	-	-	-	-	1.4 U
Magnesium	ug/L	-	-	-	-	-	-
Magnesium (Dissolved)	ug/L	-	-	-	-	-	20300
Manganese	ug/L	-	-	-	-	-	-
Manganese (Dissolved)	ug/L	120	-	-	-	-	**1240**
Mercury (Dissolved)	ug/L	0.77	0.47 L	0.23	0.34	0.25	**0.80**
Mercury~E1631	ug/L	-	-	-	-	-	-
Mercury~SW7470	ug/L	-	3.1	1.5	58.0	3.7	13.3
Nickel	ug/L	-	-	-	-	-	-
Nickel (Dissolved)	ug/L	52	-	-	-	-	3.3 J
Potassium	ug/L	-	-	-	-	-	-
Potassium (Dissolved)	ug/L	-	-	-	-	-	150000
Selenium	ug/L	-	-	-	-	-	-
Selenium (Dissolved)	ug/L	4.6	-	-	-	-	4.0 J
Silver	ug/L	-	-	-	-	-	-
Silver (Dissolved)	ug/L	0.36	-	-	-	-	0.41 U
Sodium	ug/L	-	-	-	-	-	-
Sodium (Dissolved)	ug/L	-	-	-	-	-	590000
Thallium	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*	*STATION-H*
Sample ID:			*WS-7462-032707-RM-08*	*SW-7462-051707-RM-23*	*SW-7462-081507-MJW-13*	*WS-7462-112007-RM-02*	*SW-7462-020808-MJW-008*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	-	-	-	2.3 U
Vanadium	ug/L	-	-	-	-	-	-
Vanadium (Dissolved)	ug/L	12	-	-	-	-	1.4 J
Zinc	ug/L	-	-	-	-	-	-
Zinc (Dissolved)	ug/L	118.1	-	-	-	-	12.1 B
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	-	-	-
Carbonate	ug/L	-	-	-	-	-	-
Chloride	ug/L	230000	-	-	-	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	-	-
Sulfate	ug/L	-	-	-	-	-	-
Total Organic Carbon (TOC)	ug/L	-	-	-	-	-	-
Total Suspended Solids (TSS)	ug/L	-	-	-	-	-	-
Notes:							
B - Not detected substantially above the level reported in laboratory or field blanks.							
J - Estimated concentration.							
K - High bias.							
L - Low bias.							
U - Not present at or above the associated value.							
UJ - Estimated reporting limit.							
UL - Not present at or above the associated value. Low bias.							
- Not analyzed.							
Only dissolved metals were screened.							

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-I*	*STATION-I*	*STATION-I*	*STATION-I*
Sample ID:			*SW-7462-030608-RM-11*	*SW-7462-120304-DJT-021*	*WS-7462-032707-RM-07*	*SW-7462-051707-RM-22*	*SW-7462-081507-MJW-12*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	2 U	2 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	2 U	2 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	87	2 U	2 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	740	2 U	2 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	25	2 U	2 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	2	7.7	2.0	1 U	1 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	2 U	2 UL	1 U	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	2 U	2 UL	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	11	**59**	**15**	4	1 U
1,2-Dichloroethane	ug/L	980	2 U	2 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	525	2 U	2 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/L	52	2	11	2.6	2	1 U
1,4-Dichlorobenzene	ug/L	16	6	**95**	1.9	8	1 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	3 J	5 U	3 J	4 J	3 B
Benzene	ug/L	98	0.7 U	6.1	0.7 U	0.7 U	0.7 U
Bromodichloromethane	ug/L	110	2 U	2 U	1 U	1 U	1 U
Bromoform	ug/L	320	2 U	2 U	1 U	1 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	2 U	2 U	1 U	1 UL	1 U
Carbon disulfide	ug/L	0.92	2 U	2 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	9	2.8	1 U	1 U	2
Chlorobenzene	ug/L	64	2 U	**94**	1 U	6	1 U
Chloroethane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Chloroform (Trichloromethane)	ug/L	28	6	1 J	1 U	1 U	3
Chloromethane (Methyl Chloride)	ug/L	5500	2 U	2 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/L	590	2 U	2 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	2 U	2 U	1 U	1 U	1 U
Cyclohexane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Dibromochloromethane	ug/L	110	2 U	2 U	1 U	1 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	2 U	2 UL	1 U	1 U	1 U
Ethylbenzene	ug/L	110	2 U	2 U	1 U	1 U	1 U
Isopropylbenzene	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl acetate	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl cyclohexane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl Tert Butyl Ether	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methylene chloride	ug/L	1500	2 U	5 B	1 U	1 U	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-I*	*STATION-I*	*STATION-I*	*STATION-I*
Sample ID:			*SW-7462-030608-RM-11*	*SW-7462-120304-DJT-021*	*WS-7462-032707-RM-07*	*SW-7462-051707-RM-22*	*SW-7462-081507-MJW-12*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	2 U	2 U	1 U	1 U	1 U
Tetrachloroethene	ug/L	60	8	2 U	2.6	1 U	5
Toluene	ug/L	94	2 U	2 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	2 U	2 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/L	244	2 U	2 U	1 U	1 U	1 U
Trichloroethene	ug/L	47	2 U	2 U	1 U	1 U	1
Trichlorofluoromethane (CFC-11)	ug/L	110	2 U	2 U	1 U	1 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	2 U	2 U	1 U	1 U	1 U
Vinyl chloride	ug/L	930	2 U	2 U	1 U	1 U	1 U
Xylene (total)	ug/L	13	2 U	2 U	1 U	1 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	10 U	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	-	25 U	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	-	10 U	-	-	-
2,4-Dichlorophenol	ug/L	17	-	10 U	-	-	-
2,4-Dimethylphenol	ug/L	21	-	10 U	-	-	-
2,4-Dinitrophenol	ug/L	6	-	25 U	-	-	-
2,4-Dinitrotoluene	ug/L	230	-	10 U	-	-	-
2,6-Dinitrotoluene	ug/L	60	-	10 U	-	-	-
2-Chloronaphthalene	ug/L	16	-	10 U	-	-	-
2-Chlorophenol	ug/L	44	-	10 U	-	-	-
2-Methylnaphthalene	ug/L	14.2	-	10 U	-	-	-
2-Methylphenol	ug/L	13	-	10 U	-	-	-
2-Nitroaniline	ug/L	49	-	25 U	-	-	-
2-Nitrophenol	ug/L	73	-	10 U	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	10 U	-	-	-
3-Nitroaniline	ug/L	9.8	-	25 U	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	25 U	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	10 U	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	-	10 U	-	-	-
4-Chloroaniline	ug/L	10	-	10 U	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	10 U	-	-	-
4-Methylphenol	ug/L	-	-	10 UL	-	-	-
4-Nitroaniline	ug/L	-	-	25 U	-	-	-
4-Nitrophenol	ug/L	58	-	25 U	-	-	-
Acenaphthene	ug/L	23	-	10 U	-	-	-
Acenaphthylene	ug/L	-	-	10 U	-	-	-
Acetophenone	ug/L	-	-	10 U	-	-	-
Anthracene	ug/L	0.73	-	10 U	-	-	-
Atrazine	ug/L	-	-	10 U	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-I*	*STATION-I*	*STATION-I*	*STATION-I*
Sample ID:			*SW-7462-030608-RM-11*	*SW-7462-120304-DJT-021*	*WS-7462-032707-RM-07*	*SW-7462-051707-RM-22*	*SW-7462-081507-MJW-12*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	10 UJ	-	-	-
Benzo(a)anthracene	ug/L	0.025	-	10 U	-	-	-
Benzo(a)pyrene	ug/L	0.014	-	10 U	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	-	10 U	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	10 U	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	10 U	-	-	-
Biphenyl	ug/L	-	-	10 U	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	10 U	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	-	10 U	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	10 U	-	-	-
Butyl benzylphthalate	ug/L	22	-	10 U	-	-	-
Caprolactam	ug/L	-	-	10 U	-	-	-
Carbazole	ug/L	9.3	-	10 U	-	-	-
Chrysene	ug/L	-	-	10 U	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	10 U	-	-	-
Dibenzofuran	ug/L	3.7	-	10 U	-	-	-
Diethyl phthalate	ug/L	220	-	10 U	-	-	-
Dimethyl phthalate	ug/L	330	-	10 U	-	-	-
Di-n-butylphthalate	ug/L	33	-	10 U	-	-	-
Di-n-octyl phthalate	ug/L	3	-	10 U	-	-	-
Fluoranthene	ug/L	3.6	-	10 U	-	-	-
Fluorene	ug/L	2.4	-	10 U	-	-	-
Hexachlorobenzene	ug/L	3.68	-	10 U	-	-	-
Hexachlorobutadiene	ug/L	9.3	-	10 U	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	-	10 U	-	-	-
Hexachloroethane	ug/L	12	-	10 U	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	10 U	-	-	-
Isophorone	ug/L	830	-	10 U	-	-	-
Naphthalene	ug/L	12	-	10 U	-	-	-
Nitrobenzene	ug/L	220	-	10 U	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	10 U	-	-	-
N-Nitrosodiphenylamine	ug/L	25	-	10 U	-	-	-
Pentachlorophenol	ug/L	6.7	-	25 U	-	-	-
Phenanthrene	ug/L	0.93	-	10 U	-	-	-
Phenol	ug/L	110	-	10 U	-	-	-
Pyrene	ug/L	-	-	10 U	-	-	-
Metals							
Aluminum	ug/L	-	-	2390 K	-	-	-
Aluminum (Dissolved)	ug/L	87	-	27.2	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-I*	*STATION-I*	*STATION-I*	*STATION-I*
Sample ID:			*SW-7462-030608-RM-11*	*SW-7462-120304-DJT-021*	*WS-7462-032707-RM-07*	*SW-7462-051707-RM-22*	*SW-7462-081507-MJW-12*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	3.3 U	-	-	-
Antimony (Dissolved)	ug/L	30	-	3.3 U	-	-	-
Arsenic	ug/L	-	-	6.0 J	-	-	-
Arsenic (Dissolved)	ug/L	150	-	6.0	-	-	-
Barium	ug/L	-	-	60.0	-	-	-
Barium (Dissolved)	ug/L	438	-	45.6	-	-	-
Beryllium	ug/L	-	-	0.20 U	-	-	-
Beryllium (Dissolved)	ug/L	2.4	-	0.20 U	-	-	-
Cadmium	ug/L	-	-	0.40 U	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	0.40 U	-	-	-
Calcium	ug/L	-	22800	40000	-	-	-
Calcium (Dissolved)	ug/L	-	-	38100	-	-	-
Chromium Total	ug/L	-	-	6.7 B	-	-	-
Chromium Total (Dissolved)	ug/L	11	-	1.0 U	-	-	-
Cobalt	ug/L	-	-	6.9	-	-	-
Cobalt (Dissolved)	ug/L	23	-	5.1	-	-	-
Copper	ug/L	-	-	5.3	-	-	-
Copper (Dissolved)	ug/L	9	-	1.9	-	-	-
Iron	ug/L	-	-	2730	-	-	-
Iron (Dissolved)	ug/L	320	-	64.5	-	-	-
Lead	ug/L	-	-	3.0 L	-	-	-
Lead (Dissolved)	ug/L	2.5	-	1.4 U	-	-	-
Magnesium	ug/L	-	-	29200	-	-	-
Magnesium (Dissolved)	ug/L	-	-	28500	-	-	-
Manganese	ug/L	-	1340	1950	-	-	-
Manganese (Dissolved)	ug/L	120	-	**1750**	-	-	-
Mercury (Dissolved)	ug/L	0.77	**1.3**	0.10 UL	0.10 UL	0.13 J	0.10 U
Mercury~E1631	ug/L	-	-	8.48	-	-	-
Mercury~SW7470	ug/L	-	7.5	5.9 J	0.80	1.6	3.8
Nickel	ug/L	-	-	11.5	-	-	-
Nickel (Dissolved)	ug/L	52	-	5.9	-	-	-
Potassium	ug/L	-	139000	26000 J	-	-	-
Potassium (Dissolved)	ug/L	-	-	24300	-	-	-
Selenium	ug/L	-	-	2.4 UL	-	-	-
Selenium (Dissolved)	ug/L	4.6	-	2.4 U	-	-	-
Silver	ug/L	-	-	0.40 U	-	-	-
Silver (Dissolved)	ug/L	0.36	-	0.40 U	-	-	-
Sodium	ug/L	-	563000	243000	-	-	-
Sodium (Dissolved)	ug/L	-	-	237000	-	-	-
Thallium	ug/L	-	-	3.1 U	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-H*	*STATION-I*	*STATION-I*	*STATION-I*	*STATION-I*
Sample ID:			*SW-7462-030608-RM-11*	*SW-7462-120304-DJT-021*	*WS-7462-032707-RM-07*	*SW-7462-051707-RM-22*	*SW-7462-081507-MJW-12*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	3.1 U	-	-	-
Vanadium	ug/L	-	-	14.4	-	-	-
Vanadium (Dissolved)	ug/L	12	-	2.3	-	-	-
Zinc	ug/L	-	-	89.2	-	-	-
Zinc (Dissolved)	ug/L	118.1	-	54.3	-	-	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	104000	-	-	-	-
Carbonate	ug/L	-	1000 U	-	-	-	-
Chloride	ug/L	230000	900000	-	-	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	-	5600	-	-	-
Sulfate	ug/L	-	163000	-	-	-	-
Total Organic Carbon (TOC)	ug/L	-	-	5300	-	-	-
Total Suspended Solids (TSS)	ug/L	-	9000	45000	-	-	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-I*	*STATION-I*	*STATION-I*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-112007-RM-03*	*SW-7462-020808-MJW-007*	*SW-7462-030608-RM-13*	*SW-7462-120304-DJT-022*	*WS-7462-032707-RM-05*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	1 U	1 U	2 U	2 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	1 U	1 U	2 U	2 U	1 U
1,1,2-Trichloroethane	ug/L	87	1 U	1 U	2 U	2 U	1 U
1,1-Dichloroethane	ug/L	740	1 U	1 U	2 U	2 U	1 U
1,1-Dichloroethene	ug/L	25	1 U	1 U	2 U	2 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	1 U	7.4	7	83 K	41 J
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	1 U	1 U	2 U	2 UL	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	1 U	1 U	2 U	2 UL	1 U
1,2-Dichlorobenzene	ug/L	14	14	38	38	560 K	260
1,2-Dichloroethane	ug/L	980	1 U	1 U	2 U	2 U	1 U
1,2-Dichloropropane	ug/L	525	1 U	1 U	2 U	2 U	1 U
1,3-Dichlorobenzene	ug/L	52	3.4	9.0	8	98 K	42 J
1,4-Dichlorobenzene	ug/L	16	3.9	33	23	820 K	230 J
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	5 U	5 U	3 J	5 U	3 J
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	39 K	9.9 J
Bromodichloromethane	ug/L	110	1 U	1 U	2 U	2 U	1 U
Bromoform	ug/L	320	1 U	1 U	2 U	2 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	1 U	1 U	2 U	2 U	1 U
Carbon disulfide	ug/L	0.92	1 U	1 U	2 U	2 U	1 U
Carbon tetrachloride	ug/L	9.8	1.5	1.9	2	50 K	3.0
Chlorobenzene	ug/L	64	1 U	7.3	3	780 K	150 J
Chloroethane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Chloroform (Trichloromethane)	ug/L	28	1 U	1 U	2 U	9.2 K	1.0
Chloromethane (Methyl Chloride)	ug/L	5500	1 U	1 U	2 U	2 U	1 U
cis-1,2-Dichloroethene	ug/L	590	1 U	1 U	2 U	2 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	1 U	1 U	2 U	2 U	1 U
Cyclohexane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Dibromochloromethane	ug/L	110	1 U	1 U	2 U	2 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	1 U	1 U	2 U	2 UL	1 U
Ethylbenzene	ug/L	110	1 U	1 U	2 U	2 U	1 U
Isopropylbenzene	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl acetate	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl cyclohexane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl Tert Butyl Ether	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methylene chloride	ug/L	1500	1 U	1 U	2 U	6 B	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-I*	*STATION-I*	*STATION-I*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-112007-RM-03*	*SW-7462-020808-MJW-007*	*SW-7462-030608-RM-13*	*SW-7462-120304-DJT-022*	*WS-7462-032707-RM-05*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	1 U	1 U	2 U	2 U	1 U
Tetrachloroethene	ug/L	60	3.1	3.0	3	8.6 K	2.0
Toluene	ug/L	94	1 U	1 U	2 U	2 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	1 U	1 U	2 U	2 U	1 U
trans-1,3-Dichloropropene	ug/L	244	1 U	1 U	2 U	2 U	1 U
Trichloroethene	ug/L	47	1 U	1 U	2 U	2 U	1 U
Trichlorofluoromethane (CFC-11)	ug/L	110	1 U	1 U	2 U	2 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	1 U	1 U	2 U	2 U	1 U
Vinyl chloride	ug/L	930	1 U	1 U	2 U	2 U	1 U
Xylene (total)	ug/L	13	1 U	1 U	2 U	2 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	10 U	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	25 U	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	10 U	-
2,4-Dichlorophenol	ug/L	17	-	-	-	10 U	-
2,4-Dimethylphenol	ug/L	21	-	-	-	10 U	-
2,4-Dinitrophenol	ug/L	6	-	-	-	25 U	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	10 U	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	10 U	-
2-Chloronaphthalene	ug/L	16	-	-	-	10 U	-
2-Chlorophenol	ug/L	44	-	-	-	10 U	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	10 U	-
2-Methylphenol	ug/L	13	-	-	-	10 U	-
2-Nitroaniline	ug/L	49	-	-	-	25 U	-
2-Nitrophenol	ug/L	73	-	-	-	10 U	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	10 U	-
3-Nitroaniline	ug/L	9.8	-	-	-	25 U	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	25 U	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	10 U	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	10 U	-
4-Chloroaniline	ug/L	10	-	-	-	10 U	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	10 U	-
4-Methylphenol	ug/L	-	-	-	-	10 UL	-
4-Nitroaniline	ug/L	-	-	-	-	25 U	-
4-Nitrophenol	ug/L	58	-	-	-	25 U	-
Acenaphthene	ug/L	23	-	-	-	10 U	-
Acenaphthylene	ug/L	-	-	-	-	10 U	-
Acetophenone	ug/L	-	-	-	-	10 U	-
Anthracene	ug/L	0.73	-	-	-	10 U	-
Atrazine	ug/L	-	-	-	-	10 U	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-I*	*STATION-I*	*STATION-I*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-112007-RM-03*	*SW-7462-020808-MJW-007*	*SW-7462-030608-RM-13*	*SW-7462-120304-DJT-022*	*WS-7462-032707-RM-05*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	10 UJ	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	10 U	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	10 U	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	10 U	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	10 U	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	10 U	-
Biphenyl	ug/L	-	-	-	-	10 U	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	10 U	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	10 U	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	10 U	-
Butyl benzylphthalate	ug/L	22	-	-	-	10 U	-
Caprolactam	ug/L	-	-	-	-	10 U	-
Carbazole	ug/L	9.3	-	-	-	10 U	-
Chrysene	ug/L	-	-	-	-	10 U	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	10 U	-
Dibenzofuran	ug/L	3.7	-	-	-	10 U	-
Diethyl phthalate	ug/L	220	-	-	-	10 U	-
Dimethyl phthalate	ug/L	330	-	-	-	10 U	-
Di-n-butylphthalate	ug/L	33	-	-	-	10 U	-
Di-n-octyl phthalate	ug/L	3	-	-	-	10 U	-
Fluoranthene	ug/L	3.6	-	-	-	10 U	-
Fluorene	ug/L	2.4	-	-	-	10 U	-
Hexachlorobenzene	ug/L	3.68	-	-	-	10 U	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	10 U	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	10 U	-
Hexachloroethane	ug/L	12	-	-	-	10 U	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	10 U	-
Isophorone	ug/L	830	-	-	-	10 U	-
Naphthalene	ug/L	12	-	-	-	10 U	-
Nitrobenzene	ug/L	220	-	-	-	10 U	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	10 U	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	10 U	-
Pentachlorophenol	ug/L	6.7	-	-	-	25 U	-
Phenanthrene	ug/L	0.93	-	-	-	10 U	-
Phenol	ug/L	110	-	-	-	10 U	-
Pyrene	ug/L	-	-	-	-	10 U	-
Metals							
Aluminum	ug/L	-	-	-	-	1580 K	-
Aluminum (Dissolved)	ug/L	87	-	15.6 B	-	34.3	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-I*	*STATION-I*	*STATION-I*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-112007-RM-03*	*SW-7462-020808-MJW-007*	*SW-7462-030608-RM-13*	*SW-7462-120304-DJT-022*	*WS-7462-032707-RM-05*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	3.3 U	-
Antimony (Dissolved)	ug/L	30	-	2.3 U	-	3.3 U	-
Arsenic	ug/L	-	-	-	-	5.2 J	-
Arsenic (Dissolved)	ug/L	150	-	1.8 U	-	4.4	-
Barium	ug/L	-	-	-	-	54.6	-
Barium (Dissolved)	ug/L	438	-	44.2 J	-	54.6	-
Beryllium	ug/L	-	-	-	-	0.20 U	-
Beryllium (Dissolved)	ug/L	2.4	-	0.18 U	-	0.20 U	-
Cadmium	ug/L	-	-	-	-	0.40 U	-
Cadmium (Dissolved)	ug/L	0.25	-	0.32 U	-	0.40 U	-
Calcium	ug/L	-	-	-	37200	44100	-
Calcium (Dissolved)	ug/L	-	-	39100	-	47000	-
Chromium Total	ug/L	-	-	-	-	3.5 B	-
Chromium Total (Dissolved)	ug/L	11	-	1.4 B	-	1.3	-
Cobalt	ug/L	-	-	-	-	15.6	-
Cobalt (Dissolved)	ug/L	23	-	6.6 J	-	15.0	-
Copper	ug/L	-	-	-	-	3.7	-
Copper (Dissolved)	ug/L	9	-	1.6 B	-	1.5	-
Iron	ug/L	-	-	-	-	1930	-
Iron (Dissolved)	ug/L	320	-	28.0 B	-	213	-
Lead	ug/L	-	-	-	-	3.4 L	-
Lead (Dissolved)	ug/L	2.5	-	1.4 U	-	1.4 U	-
Magnesium	ug/L	-	-	-	-	27500	-
Magnesium (Dissolved)	ug/L	-	-	33200	-	29000	-
Manganese	ug/L	-	-	-	3490	4410	-
Manganese (Dissolved)	ug/L	120	-	**4030**	-	**4510**	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 U	0.10 U	0.10 UL	0.10 UL
Mercury~E1631	ug/L	-	-	-	-	3.49	-
Mercury~SW7470	ug/L	-	2.4	1.4	0.83	1.7 J	0.64 J
Nickel	ug/L	-	-	-	-	13.1	-
Nickel (Dissolved)	ug/L	52	-	8.0 J	-	12.1	-
Potassium	ug/L	-	-	-	40200	29100 J	-
Potassium (Dissolved)	ug/L	-	-	29100	-	34600	-
Selenium	ug/L	-	-	-	-	2.4 UL	-
Selenium (Dissolved)	ug/L	4.6	-	2.4 U	-	2.4 U	-
Silver	ug/L	-	-	-	-	0.40 U	-
Silver (Dissolved)	ug/L	0.36	-	0.41 U	-	0.40 U	-
Sodium	ug/L	-	-	-	285000	289000	-
Sodium (Dissolved)	ug/L	-	-	301000	-	310000	-
Thallium	ug/L	-	-	-	-	3.1 U	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-I*	*STATION-I*	*STATION-I*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-112007-RM-03*	*SW-7462-020808-MJW-007*	*SW-7462-030608-RM-13*	*SW-7462-120304-DJT-022*	*WS-7462-032707-RM-05*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	2.3 U	-	3.1 U	-
Vanadium	ug/L	-	-	-	-	7.8	-
Vanadium (Dissolved)	ug/L	12	-	0.89 U	-	2.0	-
Zinc	ug/L	-	-	-	-	97.0	-
Zinc (Dissolved)	ug/L	118.1	-	9.4 B	-	65.7	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	97500	-	-
Carbonate	ug/L	-	-	-	1000 U	-	-
Chloride	ug/L	230000	-	-	432000	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	4100	-
Sulfate	ug/L	-	-	-	184000	-	-
Total Organic Carbon (TOC)	ug/L	-	-	-	-	1300	-
Total Suspended Solids (TSS)	ug/L	-	-	-	7000	36000	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-032707-RM-06*	*SW-7462-051707-RM-21*	*SW-7462-081507-MJW-11*	*WS-7462-112007-RM-04*	*SW-7462-020808-MJW-006*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
			(Duplicate)				
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	87	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	740	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	25	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	19 J	4	1 U	3.8	23
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	**160**	**15**	1 U	**79**	**120**
1,2-Dichloroethane	ug/L	980	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	525	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/L	52	22 J	6	1 U	14	26
1,4-Dichlorobenzene	ug/L	16	**94 J**	**30**	1 U	**89**	**160**
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	3 J	4 J	8 B	5 U	3 J
Benzene	ug/L	98	3.0 J	2	0.7 U	2.9	4.6
Bromodichloromethane	ug/L	110	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	320	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	1 U	1 UL	1 U	1 U	1 U
Carbon disulfide	ug/L	0.92	1 U	1 U	**2 B**	1 U	1 U
Carbon tetrachloride	ug/L	9.8	1.7	1 U	1 U	1.8	8.7
Chlorobenzene	ug/L	64	44 J	20	1 U	43	**96**
Chloroethane	ug/L	-	1 U	1 U	1 U	1 U	1 U
Chloroform (Trichloromethane)	ug/L	28	1 U	1 U	1 U	1 U	2.3
Chloromethane (Methyl Chloride)	ug/L	5500	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/L	590	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	1 U	1 U	1 U	1 U	1 U
Cyclohexane	ug/L	-	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/L	110	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	110	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/L	-	1 U	1 U	1 U	1 U	1 U
Methyl acetate	ug/L	-	1 U	1 U	1 U	1 U	1 U
Methyl cyclohexane	ug/L	-	1 U	1 U	1 U	1 U	1 U
Methyl Tert Butyl Ether	ug/L	-	1 U	1 U	1 U	1 U	1 U
Methylene chloride	ug/L	1500	1 U	1 U	1 U	1 U	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-032707-RM-06*	*SW-7462-051707-RM-21*	*SW-7462-081507-MJW-11*	*WS-7462-112007-RM-04*	*SW-7462-020808-MJW-006*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
			(Duplicate)				
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/L	60	1.3	1 U	1 U	1 U	2.4
Toluene	ug/L	94	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/L	244	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	47	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane (CFC-11)	ug/L	110	1 U	1 U	1 U	1 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	ug/L	930	1 U	1 U	1 U	1 U	1 U
Xylene (total)	ug/L	13	1 U	1 U	1 U	1 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	-	-
2,4-Dichlorophenol	ug/L	17	-	-	-	-	-
2,4-Dimethylphenol	ug/L	21	-	-	-	-	-
2,4-Dinitrophenol	ug/L	6	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	-	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	-	-
2-Chloronaphthalene	ug/L	16	-	-	-	-	-
2-Chlorophenol	ug/L	44	-	-	-	-	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	-	-
2-Methylphenol	ug/L	13	-	-	-	-	-
2-Nitroaniline	ug/L	49	-	-	-	-	-
2-Nitrophenol	ug/L	73	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	-	-
3-Nitroaniline	ug/L	9.8	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	-	-
4-Chloroaniline	ug/L	10	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-	-
4-Methylphenol	ug/L	-	-	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-	-	-
4-Nitrophenol	ug/L	58	-	-	-	-	-
Acenaphthene	ug/L	23	-	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-	-	-
Acetophenone	ug/L	-	-	-	-	-	-
Anthracene	ug/L	0.73	-	-	-	-	-
Atrazine	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-032707-RM-06*	*SW-7462-051707-RM-21*	*SW-7462-081507-MJW-11*	*WS-7462-112007-RM-04*	*SW-7462-020808-MJW-006*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
			(Duplicate)				
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	-	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	-	-
Biphenyl	ug/L	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	-	-
Butyl benzylphthalate	ug/L	22	-	-	-	-	-
Caprolactam	ug/L	-	-	-	-	-	-
Carbazole	ug/L	9.3	-	-	-	-	-
Chrysene	ug/L	-	-	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-	-
Dibenzofuran	ug/L	3.7	-	-	-	-	-
Diethyl phthalate	ug/L	220	-	-	-	-	-
Dimethyl phthalate	ug/L	330	-	-	-	-	-
Di-n-butylphthalate	ug/L	33	-	-	-	-	-
Di-n-octyl phthalate	ug/L	3	-	-	-	-	-
Fluoranthene	ug/L	3.6	-	-	-	-	-
Fluorene	ug/L	2.4	-	-	-	-	-
Hexachlorobenzene	ug/L	3.68	-	-	-	-	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	-	-
Hexachloroethane	ug/L	12	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-	-
Isophorone	ug/L	830	-	-	-	-	-
Naphthalene	ug/L	12	-	-	-	-	-
Nitrobenzene	ug/L	220	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	-	-
Pentachlorophenol	ug/L	6.7	-	-	-	-	-
Phenanthrene	ug/L	0.93	-	-	-	-	-
Phenol	ug/L	110	-	-	-	-	-
Pyrene	ug/L	-	-	-	-	-	-
Metals							
Aluminum	ug/L	-	-	-	-	-	-
Aluminum (Dissolved)	ug/L	87	-	-	-	-	20.3 B

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-032707-RM-06*	*SW-7462-051707-RM-21*	*SW-7462-081507-MJW-11*	*WS-7462-112007-RM-04*	*SW-7462-020808-MJW-006*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
			(Duplicate)				
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	-	-
Antimony (Dissolved)	ug/L	30	-	-	-	-	2.3 U
Arsenic	ug/L	-	-	-	-	-	-
Arsenic (Dissolved)	ug/L	150	-	-	-	-	1.8 U
Barium	ug/L	-	-	-	-	-	-
Barium (Dissolved)	ug/L	438	-	-	-	-	49.1 J
Beryllium	ug/L	-	-	-	-	-	-
Beryllium (Dissolved)	ug/L	2.4	-	-	-	-	0.18 U
Cadmium	ug/L	-	-	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-	0.32 U
Calcium	ug/L	-	-	-	-	-	-
Calcium (Dissolved)	ug/L	-	-	-	-	-	47900
Chromium Total	ug/L	-	-	-	-	-	-
Chromium Total (Dissolved)	ug/L	11	-	-	-	-	1.6 B
Cobalt	ug/L	-	-	-	-	-	-
Cobalt (Dissolved)	ug/L	23	-	-	-	-	13.0 J
Copper	ug/L	-	-	-	-	-	-
Copper (Dissolved)	ug/L	9	-	-	-	-	1.9 B
Iron	ug/L	-	-	-	-	-	-
Iron (Dissolved)	ug/L	320	-	-	-	-	27.9 B
Lead	ug/L	-	-	-	-	-	-
Lead (Dissolved)	ug/L	2.5	-	-	-	-	1.5 B
Magnesium	ug/L	-	-	-	-	-	-
Magnesium (Dissolved)	ug/L	-	-	-	-	-	34200
Manganese	ug/L	-	-	-	-	-	-
Manganese (Dissolved)	ug/L	120	-	-	-	-	**7220**
Mercury (Dissolved)	ug/L	0.77	0.10 UL	0.10 U	0.10 U	0.10 U	0.10 U
Mercury~E1631	ug/L	-	-	-	-	-	-
Mercury~SW7470	ug/L	-	1.4 J	0.68	0.64	1.6	18.8
Nickel	ug/L	-	-	-	-	-	-
Nickel (Dissolved)	ug/L	52	-	-	-	-	10.0 J
Potassium	ug/L	-	-	-	-	-	-
Potassium (Dissolved)	ug/L	-	-	-	-	-	38600
Selenium	ug/L	-	-	-	-	-	-
Selenium (Dissolved)	ug/L	4.6	-	-	-	-	2.4 U
Silver	ug/L	-	-	-	-	-	-
Silver (Dissolved)	ug/L	0.36	-	-	-	-	**0.96 J**
Sodium	ug/L	-	-	-	-	-	-
Sodium (Dissolved)	ug/L	-	-	-	-	-	348000
Thallium	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*	*STATION-J*
Sample ID:			*WS-7462-032707-RM-06*	*SW-7462-051707-RM-21*	*SW-7462-081507-MJW-11*	*WS-7462-112007-RM-04*	*SW-7462-020808-MJW-006*
Sample Date:			*3/27/2007*	*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*
			(Duplicate)				
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	-	-	-	2.3 U
Vanadium	ug/L	-	-	-	-	-	-
Vanadium (Dissolved)	ug/L	12	-	-	-	-	0.89 U
Zinc	ug/L	-	-	-	-	-	-
Zinc (Dissolved)	ug/L	118.1	-	-	-	-	16.1 B
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	-	-	-
Carbonate	ug/L	-	-	-	-	-	-
Chloride	ug/L	230000	-	-	-	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	-	-
Sulfate	ug/L	-	-	-	-	-	-
Total Organic Carbon (TOC)	ug/L	-	-	-	-	-	-
Total Suspended Solids (TSS)	ug/L	-	-	-	-	-	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-K*	*STATION-K*	*STATION-K*
Sample ID:			*SW-7462-030608-RM-15*	*SW-7462-120304-DJT-017*	*WS-7462-032707-RM-04*	*SW-7462-051707-RM-20*	*SW-7462-081507-MJW-10*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	2 U	2 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	2 U	2 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	87	2 U	2 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	740	2 U	2 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	25	2 U	2 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	19	40	45	10	28
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	2 U	2 UL	1 U	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	2 U	2 UL	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	**110**	**310**	**390**	**57**	**170**
1,2-Dichloroethane	ug/L	980	2 U	2 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	525	2 U	2 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/L	52	21	50	48	17	42
1,4-Dichlorobenzene	ug/L	16	**110**	**470**	**590**	**88**	**240**
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	3 J	4 B	3 J	4 J	6 B
Benzene	ug/L	98	4	16	11	15	6
Bromodichloromethane	ug/L	110	2 U	2 U	1 U	1 U	1 U
Bromoform	ug/L	320	2 U	2 U	1 U	1 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	2 U	2 U	1 U	1 UL	1 U
Carbon disulfide	ug/L	0.92	2 U	2 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	5	**20**	6.9	3	**15**
Chlorobenzene	ug/L	64	57	**430**	**500**	**88 L**	**97**
Chloroethane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Chloroform (Trichloromethane)	ug/L	28	1 J	5.7	1.9	1	5
Chloromethane (Methyl Chloride)	ug/L	5500	2 U	2 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/L	590	2 U	2 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	2 U	2 U	1 U	1 U	1 U
Cyclohexane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Dibromochloromethane	ug/L	110	2 U	2 U	1 U	1 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	2 U	2 UL	1 U	1 U	1 U
Ethylbenzene	ug/L	110	2 U	2 U	1 U	1 U	1 U
Isopropylbenzene	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl acetate	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl cyclohexane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl Tert Butyl Ether	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methylene chloride	ug/L	1500	2 U	15 B	1 U	1 U	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-K*	*STATION-K*	*STATION-K*
Sample ID:			*SW-7462-030608-RM-15*	*SW-7462-120304-DJT-017*	*WS-7462-032707-RM-04*	*SW-7462-051707-RM-20*	*SW-7462-081507-MJW-10*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	2 U	2 U	1 U	1 U	1 U
Tetrachloroethene	ug/L	60	2	2.6	2.8	1	3
Toluene	ug/L	94	2 U	2 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	2 U	2 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/L	244	2 U	2 U	1 U	1 U	1 U
Trichloroethene	ug/L	47	2 U	2 U	1 U	1 U	1 U
Trichlorofluoromethane (CFC-11)	ug/L	110	2 U	2 U	1 U	1 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	2 U	2 U	1 U	1 U	1 U
Vinyl chloride	ug/L	930	2 U	2 U	1 U	1 U	1 U
Xylene (total)	ug/L	13	2 U	2 U	1 U	1 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	10 U	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	-	25 U	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	-	10 U	-	-	-
2,4-Dichlorophenol	ug/L	17	-	10 U	-	-	-
2,4-Dimethylphenol	ug/L	21	-	10 U	-	-	-
2,4-Dinitrophenol	ug/L	6	-	25 U	-	-	-
2,4-Dinitrotoluene	ug/L	230	-	10 U	-	-	-
2,6-Dinitrotoluene	ug/L	60	-	10 U	-	-	-
2-Chloronaphthalene	ug/L	16	-	10 U	-	-	-
2-Chlorophenol	ug/L	44	-	10 U	-	-	-
2-Methylnaphthalene	ug/L	14.2	-	10 U	-	-	-
2-Methylphenol	ug/L	13	-	10 U	-	-	-
2-Nitroaniline	ug/L	49	-	25 U	-	-	-
2-Nitrophenol	ug/L	73	-	10 U	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	10 U	-	-	-
3-Nitroaniline	ug/L	9.8	-	25 U	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	25 U	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	10 U	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	-	10 U	-	-	-
4-Chloroaniline	ug/L	10	-	10 U	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	10 U	-	-	-
4-Methylphenol	ug/L	-	-	10 UL	-	-	-
4-Nitroaniline	ug/L	-	-	25 U	-	-	-
4-Nitrophenol	ug/L	58	-	25 U	-	-	-
Acenaphthene	ug/L	23	-	10 U	-	-	-
Acenaphthylene	ug/L	-	-	10 U	-	-	-
Acetophenone	ug/L	-	-	10 U	-	-	-
Anthracene	ug/L	0.73	-	10 U	-	-	-
Atrazine	ug/L	-	-	10 U	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-K*	*STATION-K*	*STATION-K*
Sample ID:			*SW-7462-030608-RM-15*	*SW-7462-120304-DJT-017*	*WS-7462-032707-RM-04*	*SW-7462-051707-RM-20*	*SW-7462-081507-MJW-10*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	10 UJ	-	-	-
Benzo(a)anthracene	ug/L	0.025	-	10 U	-	-	-
Benzo(a)pyrene	ug/L	0.014	-	10 U	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	-	10 U	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	10 U	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	10 U	-	-	-
Biphenyl	ug/L	-	-	10 U	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	10 U	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	-	10 U	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	10 U	-	-	-
Butyl benzylphthalate	ug/L	22	-	10 U	-	-	-
Caprolactam	ug/L	-	-	10 U	-	-	-
Carbazole	ug/L	9.3	-	10 U	-	-	-
Chrysene	ug/L	-	-	10 U	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	10 U	-	-	-
Dibenzofuran	ug/L	3.7	-	10 U	-	-	-
Diethyl phthalate	ug/L	220	-	10 U	-	-	-
Dimethyl phthalate	ug/L	330	-	10 U	-	-	-
Di-n-butylphthalate	ug/L	33	-	10 U	-	-	-
Di-n-octyl phthalate	ug/L	3	-	10 U	-	-	-
Fluoranthene	ug/L	3.6	-	10 U	-	-	-
Fluorene	ug/L	2.4	-	10 U	-	-	-
Hexachlorobenzene	ug/L	3.68	-	10 U	-	-	-
Hexachlorobutadiene	ug/L	9.3	-	10 U	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	-	10 U	-	-	-
Hexachloroethane	ug/L	12	-	10 U	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	10 U	-	-	-
Isophorone	ug/L	830	-	10 U	-	-	-
Naphthalene	ug/L	12	-	10 U	-	-	-
Nitrobenzene	ug/L	220	-	10 U	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	10 U	-	-	-
N-Nitrosodiphenylamine	ug/L	25	-	10 U	-	-	-
Pentachlorophenol	ug/L	6.7	-	25 U	-	-	-
Phenanthrene	ug/L	0.93	-	10 U	-	-	-
Phenol	ug/L	110	-	10 U	-	-	-
Pyrene	ug/L	-	-	10 U	-	-	-
Metals							
Aluminum	ug/L	-	-	3830 K	-	-	-
Aluminum (Dissolved)	ug/L	87	-	38.7	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-K*	*STATION-K*	*STATION-K*
Sample ID:			*SW-7462-030608-RM-15*	*SW-7462-120304-DJT-017*	*WS-7462-032707-RM-04*	*SW-7462-051707-RM-20*	*SW-7462-081507-MJW-10*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	3.3 U	-	-	-
Antimony (Dissolved)	ug/L	30	-	3.3 U	-	-	-
Arsenic	ug/L	-	-	7.7 J	-	-	-
Arsenic (Dissolved)	ug/L	150	-	4.1	-	-	-
Barium	ug/L	-	-	63.7	-	-	-
Barium (Dissolved)	ug/L	438	-	38.6	-	-	-
Beryllium	ug/L	-	-	0.25	-	-	-
Beryllium (Dissolved)	ug/L	2.4	-	0.20 U	-	-	-
Cadmium	ug/L	-	-	0.82 B	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	0.40 U	-	-	-
Calcium	ug/L	-	45700	30000	-	-	-
Calcium (Dissolved)	ug/L	-	-	28700	-	-	-
Chromium Total	ug/L	-	-	7.8 B	-	-	-
Chromium Total (Dissolved)	ug/L	11	-	1.0 U	-	-	-
Cobalt	ug/L	-	-	16.7	-	-	-
Cobalt (Dissolved)	ug/L	23	-	9.3	-	-	-
Copper	ug/L	-	-	7.7	-	-	-
Copper (Dissolved)	ug/L	9	-	1.4	-	-	-
Iron	ug/L	-	-	4930	-	-	-
Iron (Dissolved)	ug/L	320	-	182	-	-	-
Lead	ug/L	-	-	7.2 L	-	-	-
Lead (Dissolved)	ug/L	2.5	-	1.4 U	-	-	-
Magnesium	ug/L	-	-	17800	-	-	-
Magnesium (Dissolved)	ug/L	-	-	16100	-	-	-
Manganese	ug/L	-	5920	3510	-	-	-
Manganese (Dissolved)	ug/L	120	-	**3180**	-	-	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 UL	0.10 UL	0.12 J	0.10 U
Mercury~E1631	ug/L	-	-	2.85	-	-	-
Mercury~SW7470	ug/L	-	1.0	3.6 J	0.16 J	0.32	0.65
Nickel	ug/L	-	-	15.1	-	-	-
Nickel (Dissolved)	ug/L	52	-	7.7	-	-	-
Potassium	ug/L	-	47800	30500 J	-	-	-
Potassium (Dissolved)	ug/L	-	-	30200	-	-	-
Selenium	ug/L	-	-	2.4 UL	-	-	-
Selenium (Dissolved)	ug/L	4.6	-	3.9	-	-	-
Silver	ug/L	-	-	0.40 U	-	-	-
Silver (Dissolved)	ug/L	0.36	-	0.40 U	-	-	-
Sodium	ug/L	-	327000	173000	-	-	-
Sodium (Dissolved)	ug/L	-	-	159000	-	-	-
Thallium	ug/L	-	-	3.1 U	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-J*	*STATION-K*	*STATION-K*	*STATION-K*	*STATION-K*
Sample ID:			*SW-7462-030608-RM-15*	*SW-7462-120304-DJT-017*	*WS-7462-032707-RM-04*	*SW-7462-051707-RM-20*	*SW-7462-081507-MJW-10*
Sample Date:			*3/6/2008*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	3.1 U	-	-	-
Vanadium	ug/L	-	-	19.9	-	-	-
Vanadium (Dissolved)	ug/L	12	-	2.4	-	-	-
Zinc	ug/L	-	-	114	-	-	-
Zinc (Dissolved)	ug/L	118.1	-	68.9	-	-	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	121000	-	-	-	-
Carbonate	ug/L	-	1000 U	-	-	-	-
Chloride	ug/L	230000	488000	-	-	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	-	1400	-	-	-
Sulfate	ug/L	-	239000	-	-	-	-
Total Organic Carbon (TOC)	ug/L	-	-	3500	-	-	-
Total Suspended Solids (TSS)	ug/L	-	34000	116000	-	-	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-K*	*STATION-K*	*STATION-K*	*STATION-L*	*STATION-L*
Sample ID:			*WS-7462-112007-RM-05*	*SW-7462-020808-MJW-005*	*SW-7462-030608-RM-17*	*SW-7462-120304-DJT-014*	*WS-7462-032707-RM-03*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	1 U	1 U	2 U	2 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	1 U	1 U	2 U	2 U	1 U
1,1,2-Trichloroethane	ug/L	87	1 U	1 U	2 U	2 U	1 U
1,1-Dichloroethane	ug/L	740	1 U	1 U	2 U	2 U	1 U
1,1-Dichloroethene	ug/L	25	1 U	1 U	2 U	2 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	49	**52**	**56**	**58 K**	12
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	1 U	1 U	2 U	2 UL	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	1 U	1 U	2 U	2 UL	1 U
1,2-Dichlorobenzene	ug/L	14	**290**	**240**	**260**	**580 K**	**130**
1,2-Dichloroethane	ug/L	980	1 U	1 U	2 U	2 U	1 U
1,2-Dichloropropane	ug/L	525	1 U	1 U	2 U	2 U	1 U
1,3-Dichlorobenzene	ug/L	52	**55**	51	**61**	**98 K**	16
1,4-Dichlorobenzene	ug/L	16	**410**	**300**	**360**	**1200 K**	**130**
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	5 U	3 J	4 J	4 B	3 J
Benzene	ug/L	98	14	13	19	**380 K**	18
Bromodichloromethane	ug/L	110	1 U	1 U	2 U	2 U	1 U
Bromoform	ug/L	320	1 U	1 U	2 U	2 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	1 U	1 U	2 U	2 U	1 U
Carbon disulfide	ug/L	0.92	1 U	1 U	2 U	2 U	1 U
Carbon tetrachloride	ug/L	9.8	9.6	7.1	9	7.9 K	1 U
Chlorobenzene	ug/L	64	**280**	**170**	**310**	**1500 K**	**92**
Chloroethane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Chloroform (Trichloromethane)	ug/L	28	2.7	2.1	2	3.7 K	1 U
Chloromethane (Methyl Chloride)	ug/L	5500	1 U	1 U	2 U	2 U	1 U
cis-1,2-Dichloroethene	ug/L	590	1 U	1 U	2 U	2 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	1 U	1 U	2 U	2 U	1 U
Cyclohexane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Dibromochloromethane	ug/L	110	1 U	1 U	2 U	2 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	1 U	1 U	2 U	2 UL	1 U
Ethylbenzene	ug/L	110	1 U	1 U	2 U	2 U	1 U
Isopropylbenzene	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl acetate	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl cyclohexane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl Tert Butyl Ether	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methylene chloride	ug/L	1500	1 U	1 U	2 U	15 B	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-K*	*STATION-K*	*STATION-K*	*STATION-L*	*STATION-L*
Sample ID:			*WS-7462-112007-RM-05*	*SW-7462-020808-MJW-005*	*SW-7462-030608-RM-17*	*SW-7462-120304-DJT-014*	*WS-7462-032707-RM-03*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	1 U	1 U	2 U	2 U	1 U
Tetrachloroethene	ug/L	60	3.4	3.4	4	2.1 K	1 U
Toluene	ug/L	94	1 U	1 U	2 U	2 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	1 U	1 U	2 U	2 U	1 U
trans-1,3-Dichloropropene	ug/L	244	1 U	1 U	2 U	2 U	1 U
Trichloroethene	ug/L	47	1 U	1 U	2 U	2 U	1 U
Trichlorofluoromethane (CFC-11)	ug/L	110	1 U	1 U	2 U	2 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	1 U	1 U	2 U	2 U	1 U
Vinyl chloride	ug/L	930	1 U	1 U	2 U	6.6 K	1.7
Xylene (total)	ug/L	13	1 U	1 U	2 U	2 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	10 U	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	25 U	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	10 U	-
2,4-Dichlorophenol	ug/L	17	-	-	-	10 U	-
2,4-Dimethylphenol	ug/L	21	-	-	-	10 U	-
2,4-Dinitrophenol	ug/L	6	-	-	-	25 U	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	10 U	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	10 U	-
2-Chloronaphthalene	ug/L	16	-	-	-	10 U	-
2-Chlorophenol	ug/L	44	-	-	-	10 U	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	10 U	-
2-Methylphenol	ug/L	13	-	-	-	10 U	-
2-Nitroaniline	ug/L	49	-	-	-	25 U	-
2-Nitrophenol	ug/L	73	-	-	-	10 U	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	10 U	-
3-Nitroaniline	ug/L	9.8	-	-	-	25 U	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	25 U	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	10 U	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	10 U	-
4-Chloroaniline	ug/L	10	-	-	-	10 U	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	10 U	-
4-Methylphenol	ug/L	-	-	-	-	10 UL	-
4-Nitroaniline	ug/L	-	-	-	-	25 U	-
4-Nitrophenol	ug/L	58	-	-	-	25 U	-
Acenaphthene	ug/L	23	-	-	-	10 U	-
Acenaphthylene	ug/L	-	-	-	-	10 U	-
Acetophenone	ug/L	-	-	-	-	10 U	-
Anthracene	ug/L	0.73	-	-	-	10 U	-
Atrazine	ug/L	-	-	-	-	10 U	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-K*	*STATION-K*	*STATION-K*	*STATION-L*	*STATION-L*
Sample ID:			*WS-7462-112007-RM-05*	*SW-7462-020808-MJW-005*	*SW-7462-030608-RM-17*	*SW-7462-120304-DJT-014*	*WS-7462-032707-RM-03*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	10 UJ	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	10 U	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	10 U	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	10 U	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	10 U	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	10 U	-
Biphenyl	ug/L	-	-	-	-	10 U	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	10 U	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	10 U	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	10 U	-
Butyl benzylphthalate	ug/L	22	-	-	-	10 U	-
Caprolactam	ug/L	-	-	-	-	10 U	-
Carbazole	ug/L	9.3	-	-	-	10 U	-
Chrysene	ug/L	-	-	-	-	10 U	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	10 U	-
Dibenzofuran	ug/L	3.7	-	-	-	10 U	-
Diethyl phthalate	ug/L	220	-	-	-	10 U	-
Dimethyl phthalate	ug/L	330	-	-	-	10 U	-
Di-n-butylphthalate	ug/L	33	-	-	-	10 U	-
Di-n-octyl phthalate	ug/L	3	-	-	-	10 U	-
Fluoranthene	ug/L	3.6	-	-	-	10 U	-
Fluorene	ug/L	2.4	-	-	-	10 U	-
Hexachlorobenzene	ug/L	3.68	-	-	-	10 U	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	10 U	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	10 U	-
Hexachloroethane	ug/L	12	-	-	-	10 U	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	10 U	-
Isophorone	ug/L	830	-	-	-	10 U	-
Naphthalene	ug/L	12	-	-	-	10 U	-
Nitrobenzene	ug/L	220	-	-	-	10 U	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	10 U	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	10 U	-
Pentachlorophenol	ug/L	6.7	-	-	-	25 U	-
Phenanthrene	ug/L	0.93	-	-	-	10 U	-
Phenol	ug/L	110	-	-	-	10 U	-
Pyrene	ug/L	-	-	-	-	10 U	-
Metals							
Aluminum	ug/L	-	-	-	-	3960 K	-
Aluminum (Dissolved)	ug/L	87	-	8.8 U	-	38.9	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-K*	*STATION-K*	*STATION-K*	*STATION-L*	*STATION-L*
Sample ID:			*WS-7462-112007-RM-05*	*SW-7462-020808-MJW-005*	*SW-7462-030608-RM-17*	*SW-7462-120304-DJT-014*	*WS-7462-032707-RM-03*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	3.3 U	-
Antimony (Dissolved)	ug/L	30	-	2.3 U	-	3.3 U	-
Arsenic	ug/L	-	-	-	-	5.5 J	-
Arsenic (Dissolved)	ug/L	150	-	1.8 U	-	2.6	-
Barium	ug/L	-	-	-	-	64.6	-
Barium (Dissolved)	ug/L	438	-	41.6 J	-	41.0	-
Beryllium	ug/L	-	-	-	-	0.20	-
Beryllium (Dissolved)	ug/L	2.4	-	0.18 U	-	0.20 U	-
Cadmium	ug/L	-	-	-	-	0.40 U	-
Cadmium (Dissolved)	ug/L	0.25	-	**0.38 J**	-	0.40 U	-
Calcium	ug/L	-	-	-	49000	33600	-
Calcium (Dissolved)	ug/L	-	-	54300	-	31800	-
Chromium Total	ug/L	-	-	-	-	7.4 B	-
Chromium Total (Dissolved)	ug/L	11	-	1.4 B	-	1.0 U	-
Cobalt	ug/L	-	-	-	-	9.3	-
Cobalt (Dissolved)	ug/L	23	-	18.5 J	-	6.6	-
Copper	ug/L	-	-	-	-	6.2	-
Copper (Dissolved)	ug/L	9	-	1.2 B	-	1.8	-
Iron	ug/L	-	-	-	-	4670	-
Iron (Dissolved)	ug/L	320	-	61.1 B	-	148	-
Lead	ug/L	-	-	-	-	4.0 L	-
Lead (Dissolved)	ug/L	2.5	-	1.4 U	-	1.4	-
Magnesium	ug/L	-	-	-	-	20200	-
Magnesium (Dissolved)	ug/L	-	-	41700	-	18700	-
Manganese	ug/L	-	-	-	6940	4860	-
Manganese (Dissolved)	ug/L	120	-	**8070**	-	**4400**	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 U	0.10 U	0.10 UL	0.10 UL
Mercury~E1631	ug/L	-	-	-	-	2.38	-
Mercury~SW7470	ug/L	-	0.28	0.15 J	0.69	2.0 J	1.1
Nickel	ug/L	-	-	-	-	12.6	-
Nickel (Dissolved)	ug/L	52	-	15.2 J	-	7.0	-
Potassium	ug/L	-	-	-	40500	23200 J	-
Potassium (Dissolved)	ug/L	-	-	36800	-	22400	-
Selenium	ug/L	-	-	-	-	2.4 UL	-
Selenium (Dissolved)	ug/L	4.6	-	3.2 J	-	2.4 U	-
Silver	ug/L	-	-	-	-	0.40 U	-
Silver (Dissolved)	ug/L	0.36	-	**1.3 J**	-	0.40 U	-
Sodium	ug/L	-	-	-	348000	172000	-
Sodium (Dissolved)	ug/L	-	-	426000	-	166000	-
Thallium	ug/L	-	-	-	-	3.1 U	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-K*	*STATION-K*	*STATION-K*	*STATION-L*	*STATION-L*
Sample ID:			*WS-7462-112007-RM-05*	*SW-7462-020808-MJW-005*	*SW-7462-030608-RM-17*	*SW-7462-120304-DJT-014*	*WS-7462-032707-RM-03*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/6/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	2.3 U	-	3.1 U	-
Vanadium	ug/L	-	-	-	-	18.0	-
Vanadium (Dissolved)	ug/L	12	-	0.89 U	-	2.1	-
Zinc	ug/L	-	-	-	-	95.9	-
Zinc (Dissolved)	ug/L	118.1	-	24.6 B	-	61.8	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	96000	-	-
Carbonate	ug/L	-	-	-	1000 U	-	-
Chloride	ug/L	230000	-	-	**571000**	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	5300	-
Sulfate	ug/L	-	-	-	270000	-	-
Total Organic Carbon (TOC)	ug/L	-	-	-	-	5000	-
Total Suspended Solids (TSS)	ug/L	-	-	-	9000	60000	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*
Sample ID:			*SW-7462-051707-RM-19*	*SW-7462-081507-MJW-09*	*WS-7462-112007-RM-06*	*SW-7462-020808-MJW-00*	*SW-7462-030608-RM-19*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/6/2008*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	1 U	1 U	1 U	1 U	2 U
1,1,2,2-Tetrachloroethane	ug/L	2400	1 U	1 U	1 U	1 U	2 U
1,1,2-Trichloroethane	ug/L	87	1 U	1 U	1 U	1 U	2 U
1,1-Dichloroethane	ug/L	740	1 U	1 U	1 U	1 U	2 U
1,1-Dichloroethene	ug/L	25	1 U	1 U	1 U	1 U	2 U
1,2,4-Trichlorobenzene	ug/L	50	8	6	3.5	29	12
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	1 U	1 U	1 U	1 U	2 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	1 U	1 U	1 U	1 U	2 U
1,2-Dichlorobenzene	ug/L	14	**75**	**130**	**97**	**280**	**120**
1,2-Dichloroethane	ug/L	980	1 U	1 U	1 U	1 U	2 U
1,2-Dichloropropane	ug/L	525	1 U	1 U	1 U	1 U	2 U
1,3-Dichlorobenzene	ug/L	52	24	30	20	43	21
1,4-Dichlorobenzene	ug/L	16	**170**	**150**	**54**	**440**	**160**
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	4 J	7 B	5 U	3 J	3 J
Benzene	ug/L	98	**120**	**190**	17	**110**	60
Bromodichloromethane	ug/L	110	1 U	1 U	1 U	1 U	2 U
Bromoform	ug/L	320	1 U	1 U	1 U	1 U	2 U
Bromomethane (Methyl Bromide)	ug/L	110	1 UL	1 U	1 U	1 U	2 U
Carbon disulfide	ug/L	0.92	1 U	1 U	1 U	1 U	2 U
Carbon tetrachloride	ug/L	9.8	1 U	1 U	1.7	3.0	2
Chlorobenzene	ug/L	64	**660**	**690**	28	**430**	**150**
Chloroethane	ug/L	-	1 U	1 U	1 U	1 U	2 U
Chloroform (Trichloromethane)	ug/L	28	1 U	1	1 U	1.2	2 U
Chloromethane (Methyl Chloride)	ug/L	5500	1 U	1 U	1 U	1 U	2 U
cis-1,2-Dichloroethene	ug/L	590	1 U	1 U	1 U	1 U	2 U
cis-1,3-Dichloropropene	ug/L	0.055	1 U	1 U	1 U	1 U	2 U
Cyclohexane	ug/L	-	1 U	1 U	1 U	1 U	2 U
Dibromochloromethane	ug/L	110	1 U	1 U	1 U	1 U	2 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	1 U	1 U	1 U	1 U	2 U
Ethylbenzene	ug/L	110	1 U	1 U	1 U	1 U	2 U
Isopropylbenzene	ug/L	-	1 U	1 U	1 U	1 U	2 U
Methyl acetate	ug/L	-	1 U	1 U	1 U	1 U	2 U
Methyl cyclohexane	ug/L	-	1 U	5	1 U	1 U	2 U
Methyl Tert Butyl Ether	ug/L	-	1 U	1 U	1 U	1 U	2 U
Methylene chloride	ug/L	1500	1 U	1 U	1 U	1 U	2 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*
Sample ID:			*SW-7462-051707-RM-19*	*SW-7462-081507-MJW-09*	*WS-7462-112007-RM-06*	*SW-7462-020808-MJW-004*	*SW-7462-030608-RM-19*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/6/2008*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	1 U	1 U	1 U	1 U	2 U
Tetrachloroethene	ug/L	60	1 U	1 U	1 U	1 U	2 U
Toluene	ug/L	94	1 U	1 U	1 U	1 U	2 U
trans-1,2-Dichloroethene	ug/L	1160	1 U	1 U	1 U	1 U	2 U
trans-1,3-Dichloropropene	ug/L	244	1 U	1 U	1 U	1 U	2 U
Trichloroethene	ug/L	47	1 U	1 U	1 U	1 U	2 U
Trichlorofluoromethane (CFC-11)	ug/L	110	1 U	1 U	1 U	1 U	2 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	1 U	1 U	1 U	1 U	2 U
Vinyl chloride	ug/L	930	1 U	3	1 U	1.1	1 J
Xylene (total)	ug/L	13	1 U	1 U	1 U	1 U	2 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	-	-
2,4-Dichlorophenol	ug/L	17	-	-	-	-	-
2,4-Dimethylphenol	ug/L	21	-	-	-	-	-
2,4-Dinitrophenol	ug/L	6	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	-	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	-	-
2-Chloronaphthalene	ug/L	16	-	-	-	-	-
2-Chlorophenol	ug/L	44	-	-	-	-	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	-	-
2-Methylphenol	ug/L	13	-	-	-	-	-
2-Nitroaniline	ug/L	49	-	-	-	-	-
2-Nitrophenol	ug/L	73	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	-	-
3-Nitroaniline	ug/L	9.8	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	-	-
4-Chloroaniline	ug/L	10	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-	-
4-Methylphenol	ug/L	-	-	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-	-	-
4-Nitrophenol	ug/L	58	-	-	-	-	-
Acenaphthene	ug/L	23	-	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-	-	-
Acetophenone	ug/L	-	-	-	-	-	-
Anthracene	ug/L	0.73	-	-	-	-	-
Atrazine	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*
Sample ID:			*SW-7462-051707-RM-19*	*SW-7462-081507-MJW-09*	*WS-7462-112007-RM-06*	*SW-7462-020808-MJW-004*	*SW-7462-030608-RM-19*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/6/2008*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	-	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	-	-
Biphenyl	ug/L	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	-	-
Butyl benzylphthalate	ug/L	22	-	-	-	-	-
Caprolactam	ug/L	-	-	-	-	-	-
Carbazole	ug/L	9.3	-	-	-	-	-
Chrysene	ug/L	-	-	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-	-
Dibenzofuran	ug/L	3.7	-	-	-	-	-
Diethyl phthalate	ug/L	220	-	-	-	-	-
Dimethyl phthalate	ug/L	330	-	-	-	-	-
Di-n-butylphthalate	ug/L	33	-	-	-	-	-
Di-n-octyl phthalate	ug/L	3	-	-	-	-	-
Fluoranthene	ug/L	3.6	-	-	-	-	-
Fluorene	ug/L	2.4	-	-	-	-	-
Hexachlorobenzene	ug/L	3.68	-	-	-	-	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	-	-
Hexachloroethane	ug/L	12	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-	-
Isophorone	ug/L	830	-	-	-	-	-
Naphthalene	ug/L	12	-	-	-	-	-
Nitrobenzene	ug/L	220	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	-	-
Pentachlorophenol	ug/L	6.7	-	-	-	-	-
Phenanthrene	ug/L	0.93	-	-	-	-	-
Phenol	ug/L	110	-	-	-	-	-
Pyrene	ug/L	-	-	-	-	-	-
Metals							
Aluminum	ug/L	-	-	-	-	-	-
Aluminum (Dissolved)	ug/L	87	-	-	-	8.8 U	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*
Sample ID:			*SW-7462-051707-RM-19*	*SW-7462-081507-MJW-09*	*WS-7462-112007-RM-06*	*SW-7462-020808-MJW-004*	*SW-7462-030608-RM-19*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/6/2008*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	-	-
Antimony (Dissolved)	ug/L	30	-	-	-	2.3 U	-
Arsenic	ug/L	-	-	-	-	-	-
Arsenic (Dissolved)	ug/L	150	-	-	-	1.8 U	-
Barium	ug/L	-	-	-	-	-	-
Barium (Dissolved)	ug/L	438	-	-	-	40.6 J	-
Beryllium	ug/L	-	-	-	-	-	-
Beryllium (Dissolved)	ug/L	2.4	-	-	-	0.18 U	-
Cadmium	ug/L	-	-	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	0.32 U	-
Calcium	ug/L	-	-	-	-	-	53100
Calcium (Dissolved)	ug/L	-	-	-	-	52800	-
Chromium Total	ug/L	-	-	-	-	-	-
Chromium Total (Dissolved)	ug/L	11	-	-	-	1.8 B	-
Cobalt	ug/L	-	-	-	-	-	-
Cobalt (Dissolved)	ug/L	23	-	-	-	9.9 J	-
Copper	ug/L	-	-	-	-	-	-
Copper (Dissolved)	ug/L	9	-	-	-	1.4 B	-
Iron	ug/L	-	-	-	-	-	-
Iron (Dissolved)	ug/L	320	-	-	-	45.0 B	-
Lead	ug/L	-	-	-	-	-	-
Lead (Dissolved)	ug/L	2.5	-	-	-	1.4 U	-
Magnesium	ug/L	-	-	-	-	-	-
Magnesium (Dissolved)	ug/L	-	-	-	-	38800	-
Manganese	ug/L	-	-	-	-	-	9410
Manganese (Dissolved)	ug/L	120	-	-	-	**10200**	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.13 J	0.10 U	0.10 U	0.10 U
Mercury~E1631	ug/L	-	-	-	-	-	-
Mercury~SW7470	ug/L	-	1.4	1.3	0.26	2.1	0.61
Nickel	ug/L	-	-	-	-	-	-
Nickel (Dissolved)	ug/L	52	-	-	-	9.4 J	-
Potassium	ug/L	-	-	-	-	-	44800
Potassium (Dissolved)	ug/L	-	-	-	-	37300	-
Selenium	ug/L	-	-	-	-	-	-
Selenium (Dissolved)	ug/L	4.6	-	-	-	3.2 J	-
Silver	ug/L	-	-	-	-	-	-
Silver (Dissolved)	ug/L	0.36	-	-	-	**1.3 J**	-
Sodium	ug/L	-	-	-	-	-	348000
Sodium (Dissolved)	ug/L	-	-	-	-	340000	-
Thallium	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*	*STATION-L*
Sample ID:			*SW-7462-051707-RM-19*	*SW-7462-081507-MJW-09*	*WS-7462-112007-RM-06*	*SW-7462-020808-MJW-004*	*SW-7462-030608-RM-19*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/6/2008*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	-	-	4.3 J	-
Vanadium	ug/L	-	-	-	-	-	-
Vanadium (Dissolved)	ug/L	12	-	-	-	0.89 U	-
Zinc	ug/L	-	-	-	-	-	-
Zinc (Dissolved)	ug/L	118.1	-	-	-	9.7 B	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	-	-	144000
Carbonate	ug/L	-	-	-	-	-	1000 U
Chloride	ug/L	230000	-	-	-	-	501000
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	-	-
Sulfate	ug/L	-	-	-	-	-	302000
Total Organic Carbon (TOC)	ug/L	-	-	-	-	-	-
Total Suspended Solids (TSS)	ug/L	-	-	-	-	-	15000

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*
Sample ID:			*SW-7462-120304-DJT-015*	*SW-7462-120304-DJT-018*	*WS-7462-032707-RM-02*	*SW-7462-051707-RM-18*	*SW-7462-081507-MJW-08*
Sample Date:			*12/3/2004*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
				(Duplicate)			
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	2 U	2 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	2 U	2 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	87	2 U	2 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	740	2 U	2 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	25	2 U	2 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	13	13 K	3.6	1	1 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	2 UL	2 UL	1 U	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	2 UL	2 UL	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/L	14	**150**	**150 K**	**74**	2	3
1,2-Dichloroethane	ug/L	980	2 U	2 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	525	2 U	2 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/L	52	33	33 K	9.2	6	3
1,4-Dichlorobenzene	ug/L	16	**320**	**330 K**	15	4	7
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	5 B	5 U	3 J	3 J	5 B
Benzene	ug/L	98	**160**	**170 K**	16	12	5
Bromodichloromethane	ug/L	110	2 U	2 U	1 U	1 U	1 U
Bromoform	ug/L	320	2 U	2 U	1 U	1 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	2 U	2 U	1 U	1 UL	1 U
Carbon disulfide	ug/L	0.92	2 U	2 U	1 U	1 U	1 U
Carbon tetrachloride	ug/L	9.8	2.8	2.9 K	1 U	1 U	1 U
Chlorobenzene	ug/L	64	**580**	**590 K**	15	4	5
Chloroethane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Chloroform (Trichloromethane)	ug/L	28	1 J	1 K	1 U	1 U	1 U
Chloromethane (Methyl Chloride)	ug/L	5500	2 U	2 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/L	590	2 U	2 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	2 U	2 U	1 U	1 U	1 U
Cyclohexane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Dibromochloromethane	ug/L	110	2 U	2 U	1 U	1 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	2 UL	2 UL	1 U	1 U	1 U
Ethylbenzene	ug/L	110	2 U	2 U	1 U	1 U	1 U
Isopropylbenzene	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl acetate	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl cyclohexane	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methyl Tert Butyl Ether	ug/L	-	2 U	2 U	1 U	1 U	1 U
Methylene chloride	ug/L	1500	14 B	15 B	1 U	1 U	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*
Sample ID:			*SW-7462-120304-DJT-015*	*SW-7462-120304-DJT-018*	*WS-7462-032707-RM-02*	*SW-7462-051707-RM-18*	*SW-7462-081507-MJW-08*
Sample Date:			*12/3/2004*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
				(Duplicate)			
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	2 U	2 U	1 U	1 U	1 U
Tetrachloroethene	ug/L	60	2 U	2 U	1 U	1 U	1 U
Toluene	ug/L	94	2 U	2 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	2 U	2 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/L	244	2 U	2 U	1 U	1 U	1 U
Trichloroethene	ug/L	47	2 U	2 U	1 U	1 U	1 U
Trichlorofluoromethane (CFC-11)	ug/L	110	2 U	2 U	1 U	1 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	2 U	2 U	1 U	1 U	1 U
Vinyl chloride	ug/L	930	3.1	2.7 K	2.3	1 U	1 U
Xylene (total)	ug/L	13	2 U	2 U	1 U	1 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	10 U	10 U	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	25 U	25 U	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	10 U	10 U	-	-	-
2,4-Dichlorophenol	ug/L	17	10 U	10 U	-	-	-
2,4-Dimethylphenol	ug/L	21	10 U	10 U	-	-	-
2,4-Dinitrophenol	ug/L	6	25 U	25 U	-	-	-
2,4-Dinitrotoluene	ug/L	230	10 U	10 U	-	-	-
2,6-Dinitrotoluene	ug/L	60	10 U	10 U	-	-	-
2-Chloronaphthalene	ug/L	16	10 U	10 U	-	-	-
2-Chlorophenol	ug/L	44	10 U	10 U	-	-	-
2-Methylnaphthalene	ug/L	14.2	10 U	10 U	-	-	-
2-Methylphenol	ug/L	13	10 U	10 U	-	-	-
2-Nitroaniline	ug/L	49	25 U	25 U	-	-	-
2-Nitrophenol	ug/L	73	10 U	10 U	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	10 U	10 U	-	-	-
3-Nitroaniline	ug/L	9.8	25 U	25 U	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	25 U	25 U	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	10 U	10 U	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	10 U	10 U	-	-	-
4-Chloroaniline	ug/L	10	10 U	10 U	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	10 U	10 U	-	-	-
4-Methylphenol	ug/L	-	10 UL	10 UL	-	-	-
4-Nitroaniline	ug/L	-	25 U	25 U	-	-	-
4-Nitrophenol	ug/L	58	25 U	25 U	-	-	-
Acenaphthene	ug/L	23	10 U	10 U	-	-	-
Acenaphthylene	ug/L	-	10 U	10 U	-	-	-
Acetophenone	ug/L	-	10 U	10 U	-	-	-
Anthracene	ug/L	0.73	10 U	10 U	-	-	-
Atrazine	ug/L	-	10 U	10 U	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*
Sample ID:			*SW-7462-120304-DJT-015*	*SW-7462-120304-DJT-018*	*WS-7462-032707-RM-02*	*SW-7462-051707-RM-18*	*SW-7462-081507-MJW-08*
Sample Date:			*12/3/2004*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
				(Duplicate)			
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	10 UJ	10 UJ	-	-	-
Benzo(a)anthracene	ug/L	0.025	10 U	10 U	-	-	-
Benzo(a)pyrene	ug/L	0.014	10 U	10 U	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	10 U	10 U	-	-	-
Benzo(g,h,i)perylene	ug/L	-	10 U	10 U	-	-	-
Benzo(k)fluoranthene	ug/L	-	10 U	10 U	-	-	-
Biphenyl	ug/L	-	10 U	10 U	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	10 U	10 U	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	10 U	10 U	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	10 U	10 U	-	-	-
Butyl benzylphthalate	ug/L	22	10 U	10 U	-	-	-
Caprolactam	ug/L	-	10 U	10 U	-	-	-
Carbazole	ug/L	9.3	10 U	10 U	-	-	-
Chrysene	ug/L	-	10 U	10 U	-	-	-
Dibenz(a,h)anthracene	ug/L	-	10 U	10 U	-	-	-
Dibenzofuran	ug/L	3.7	10 U	10 U	-	-	-
Diethyl phthalate	ug/L	220	10 U	6 J	-	-	-
Dimethyl phthalate	ug/L	330	10 U	10 U	-	-	-
Di-n-butylphthalate	ug/L	33	10 U	10 U	-	-	-
Di-n-octyl phthalate	ug/L	3	10 U	10 U	-	-	-
Fluoranthene	ug/L	3.6	10 U	10 U	-	-	-
Fluorene	ug/L	2.4	10 U	10 U	-	-	-
Hexachlorobenzene	ug/L	3.68	10 U	10 U	-	-	-
Hexachlorobutadiene	ug/L	9.3	10 U	10 U	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	10 U	10 U	-	-	-
Hexachloroethane	ug/L	12	10 U	10 U	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	10 U	10 U	-	-	-
Isophorone	ug/L	830	10 U	10 U	-	-	-
Naphthalene	ug/L	12	10 U	10 U	-	-	-
Nitrobenzene	ug/L	220	10 U	10 U	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	10 U	10 U	-	-	-
N-Nitrosodiphenylamine	ug/L	25	10 U	10 U	-	-	-
Pentachlorophenol	ug/L	6.7	25 U	25 U	-	-	-
Phenanthrene	ug/L	0.93	10 U	10 U	-	-	-
Phenol	ug/L	110	10 U	10 U	-	-	-
Pyrene	ug/L	-	10 U	10 U	-	-	-
Metals							
Aluminum	ug/L	-	1820 K	3170 K	-	-	-
Aluminum (Dissolved)	ug/L	87	32.7	35.6	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*
Sample ID:			*SW-7462-120304-DJT-015*	*SW-7462-120304-DJT-018*	*WS-7462-032707-RM-02*	*SW-7462-051707-RM-18*	*SW-7462-081507-MJW-08*
Sample Date:			*12/3/2004*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
				(Duplicate)			
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	3.3 U	3.3 U	-	-	-
Antimony (Dissolved)	ug/L	30	3.3 U	3.3 U	-	-	-
Arsenic	ug/L	-	8.2 J	5.3 J	-	-	-
Arsenic (Dissolved)	ug/L	150	3.7	4.8	-	-	-
Barium	ug/L	-	58.2	68.4	-	-	-
Barium (Dissolved)	ug/L	438	33.9	32.3	-	-	-
Beryllium	ug/L	-	0.20 U	0.20 U	-	-	-
Beryllium (Dissolved)	ug/L	2.4	0.20 U	0.20 U	-	-	-
Cadmium	ug/L	-	0.40 U	0.40 U	-	-	-
Cadmium (Dissolved)	ug/L	0.25	0.40 U	0.40 U	-	-	-
Calcium	ug/L	-	25300	27700	-	-	-
Calcium (Dissolved)	ug/L	-	25900	24400	-	-	-
Chromium Total	ug/L	-	3.6 B	5.8 B	-	-	-
Chromium Total (Dissolved)	ug/L	11	2.3	1.0 U	-	-	-
Cobalt	ug/L	-	4.5	5.8	-	-	-
Cobalt (Dissolved)	ug/L	23	3.3	3.8	-	-	-
Copper	ug/L	-	4.7	5.7	-	-	-
Copper (Dissolved)	ug/L	9	2.3	2.3	-	-	-
Iron	ug/L	-	2390	3880	-	-	-
Iron (Dissolved)	ug/L	320	33.2	36.3	-	-	-
Lead	ug/L	-	2.5 L	2.0 L	-	-	-
Lead (Dissolved)	ug/L	2.5	1.4 U	1.4 U	-	-	-
Magnesium	ug/L	-	13400	14900	-	-	-
Magnesium (Dissolved)	ug/L	-	13200	12400	-	-	-
Manganese	ug/L	-	2600	2910	-	-	-
Manganese (Dissolved)	ug/L	120	2150	2070	-	-	-
Mercury (Dissolved)	ug/L	0.77	0.10 UL	0.10 UL	0.10 UL	0.11 J	0.47
Mercury~E1631	ug/L	-	2.07	2.31	-	-	-
Mercury~SW7470	ug/L	-	1.7 J	0.89 J	0.55	0.33	0.56
Nickel	ug/L	-	8.9	10.7	-	-	-
Nickel (Dissolved)	ug/L	52	7.8	7.4	-	-	-
Potassium	ug/L	-	19900 J	22100 J	-	-	-
Potassium (Dissolved)	ug/L	-	21100	19300	-	-	-
Selenium	ug/L	-	2.4 UL	2.4 UL	-	-	-
Selenium (Dissolved)	ug/L	4.6	2.4 U	2.4 U	-	-	-
Silver	ug/L	-	0.45	0.40 U	-	-	-
Silver (Dissolved)	ug/L	0.36	0.40 U	0.40 U	-	-	-
Sodium	ug/L	-	135000	148000	-	-	-
Sodium (Dissolved)	ug/L	-	155000	141000	-	-	-
Thallium	ug/L	-	3.1 U	3.1 U	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*	*STATION-M*
Sample ID:			*SW-7462-120304-DJT-015*	*SW-7462-120304-DJT-018*	*WS-7462-032707-RM-02*	*SW-7462-051707-RM-18*	*SW-7462-081507-MJW-08*
Sample Date:			*12/3/2004*	*12/3/2004*	*3/27/2007*	*5/17/2007*	*8/15/2007*
				(Duplicate)			
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	3.1 U	3.1 U	-	-	-
Vanadium	ug/L	-	11.6	15.0	-	-	-
Vanadium (Dissolved)	ug/L	12	1.9	2.0	-	-	-
Zinc	ug/L	-	66.7	81.2	-	-	-
Zinc (Dissolved)	ug/L	118.1	59.6	45.8	-	-	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	-	-	-
Carbonate	ug/L	-	-	-	-	-	-
Chloride	ug/L	230000	-	-	-	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	9400	1000 U	-	-	-
Sulfate	ug/L	-	-	-	-	-	-
Total Organic Carbon (TOC)	ug/L	-	5700 J	6100	-	-	-
Total Suspended Solids (TSS)	ug/L	-	58000	44000	-	-	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-N*	*STATION-N*
Sample ID:			*WS-7462-112007-RM-07*	*SW-7462-020808-MJW-003*	*SW-7462-030708-RM-31*	*SW-7462-120304-DJT-013*	*WS-7462-032707-RM-01*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/7/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	1 U	1 U	2 U	2 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	2400	1 U	1 U	2 U	2 U	1 U
1,1,2-Trichloroethane	ug/L	87	1 U	1 U	2 U	2 U	1 U
1,1-Dichloroethane	ug/L	740	1 U	1 U	2 U	2 U	1 U
1,1-Dichloroethene	ug/L	25	1 U	1 U	2 U	2 U	1 U
1,2,4-Trichlorobenzene	ug/L	50	3.1	5.2	7	5.4	1.8
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	1 U	1 U	2 U	2 UL	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	1 U	1 U	2 U	2 UL	1 U
1,2-Dichlorobenzene	ug/L	14	**100**	**48**	**110**	**49**	**35**
1,2-Dichloroethane	ug/L	980	1 U	1 U	2 U	2 U	1 U
1,2-Dichloropropane	ug/L	525	1 U	1 U	2 U	2 U	1 U
1,3-Dichlorobenzene	ug/L	52	20	11	19	10	5.6
1,4-Dichlorobenzene	ug/L	16	**56**	**51**	**140**	**83**	2.5
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	5 U	4 J	3 J	7 B	5 U
Benzene	ug/L	98	45	36	**120**	43	2.5
Bromodichloromethane	ug/L	110	1 U	1 U	2 U	2 U	1 U
Bromoform	ug/L	320	1 U	1 U	2 U	2 U	1 U
Bromomethane (Methyl Bromide)	ug/L	110	1 U	1 U	2 U	2 U	1 U
Carbon disulfide	ug/L	0.92	1 U	1 U	2 U	2 U	1 U
Carbon tetrachloride	ug/L	9.8	1.7	1 U	2 U	1 J	1 U
Chlorobenzene	ug/L	64	**76**	48	**190**	**84**	1 U
Chloroethane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Chloroform (Trichloromethane)	ug/L	28	1 U	1 U	2 U	2 U	1 U
Chloromethane (Methyl Chloride)	ug/L	5500	1 U	1 U	2 U	5.4	1 U
cis-1,2-Dichloroethene	ug/L	590	1 U	1 U	2 U	2 U	1 U
cis-1,3-Dichloropropene	ug/L	0.055	1 U	1 U	2 U	2 U	1 U
Cyclohexane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Dibromochloromethane	ug/L	110	1 U	1 U	2 U	2 U	1 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	1 U	1 U	2 U	2 UL	1 U
Ethylbenzene	ug/L	110	1 U	1 U	2 U	2 U	1 U
Isopropylbenzene	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl acetate	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl cyclohexane	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methyl Tert Butyl Ether	ug/L	-	1 U	1 U	2 U	2 U	1 U
Methylene chloride	ug/L	1500	1 U	1 U	2 U	14 B	1 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-N*	*STATION-N*
Sample ID:			*WS-7462-112007-RM-07*	*SW-7462-020808-MJW-003*	*SW-7462-030708-RM-31*	*SW-7462-120304-DJT-013*	*WS-7462-032707-RM-01*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/7/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	1 U	1 U	2 U	2 U	1 U
Tetrachloroethene	ug/L	60	1 U	1 U	2 U	2 U	1 U
Toluene	ug/L	94	1 U	1 U	2 U	2 U	1 U
trans-1,2-Dichloroethene	ug/L	1160	1 U	1 U	2 U	2 U	1 U
trans-1,3-Dichloropropene	ug/L	244	1 U	1 U	2 U	2 U	1 U
Trichloroethene	ug/L	47	1 U	1 U	2 U	2 U	1 U
Trichlorofluoromethane (CFC-11)	ug/L	110	1 U	1 U	2 U	2 U	1 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	1 U	1 U	2 U	2 U	1 U
Vinyl chloride	ug/L	930	1 U	1.1	3	2 U	1.2
Xylene (total)	ug/L	13	1 U	1 U	2 U	2 U	1 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	10 U	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	25 U	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	10 U	-
2,4-Dichlorophenol	ug/L	17	-	-	-	10 U	-
2,4-Dimethylphenol	ug/L	21	-	-	-	10 U	-
2,4-Dinitrophenol	ug/L	6	-	-	-	25 U	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	10 U	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	10 U	-
2-Chloronaphthalene	ug/L	16	-	-	-	10 U	-
2-Chlorophenol	ug/L	44	-	-	-	10 U	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	10 U	-
2-Methylphenol	ug/L	13	-	-	-	10 U	-
2-Nitroaniline	ug/L	49	-	-	-	25 U	-
2-Nitrophenol	ug/L	73	-	-	-	10 U	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	10 U	-
3-Nitroaniline	ug/L	9.8	-	-	-	25 U	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	25 U	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	10 U	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	10 U	-
4-Chloroaniline	ug/L	10	-	-	-	10 U	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	10 U	-
4-Methylphenol	ug/L	-	-	-	-	10 UL	-
4-Nitroaniline	ug/L	-	-	-	-	25 U	-
4-Nitrophenol	ug/L	58	-	-	-	25 U	-
Acenaphthene	ug/L	23	-	-	-	10 U	-
Acenaphthylene	ug/L	-	-	-	-	10 U	-
Acetophenone	ug/L	-	-	-	-	10 U	-
Anthracene	ug/L	0.73	-	-	-	10 U	-
Atrazine	ug/L	-	-	-	-	10 U	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-N*	*STATION-N*
Sample ID:			*WS-7462-112007-RM-07*	*SW-7462-020808-MJW-003*	*SW-7462-030708-RM-31*	*SW-7462-120304-DJT-013*	*WS-7462-032707-RM-01*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/7/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	10 UJ	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	10 U	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	10 U	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	10 U	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	10 U	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	10 U	-
Biphenyl	ug/L	-	-	-	-	10 U	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	10 U	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	10 U	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	10 U	-
Butyl benzylphthalate	ug/L	22	-	-	-	10 U	-
Caprolactam	ug/L	-	-	-	-	10 U	-
Carbazole	ug/L	9.3	-	-	-	10 U	-
Chrysene	ug/L	-	-	-	-	10 U	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	10 U	-
Dibenzofuran	ug/L	3.7	-	-	-	10 U	-
Diethyl phthalate	ug/L	220	-	-	-	10 U	-
Dimethyl phthalate	ug/L	330	-	-	-	10 U	-
Di-n-butylphthalate	ug/L	33	-	-	-	10 U	-
Di-n-octyl phthalate	ug/L	3	-	-	-	10 U	-
Fluoranthene	ug/L	3.6	-	-	-	10 U	-
Fluorene	ug/L	2.4	-	-	-	10 U	-
Hexachlorobenzene	ug/L	3.68	-	-	-	10 U	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	10 U	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	10 U	-
Hexachloroethane	ug/L	12	-	-	-	10 U	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	10 U	-
Isophorone	ug/L	830	-	-	-	10 U	-
Naphthalene	ug/L	12	-	-	-	10 U	-
Nitrobenzene	ug/L	220	-	-	-	10 U	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	10 U	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	10 U	-
Pentachlorophenol	ug/L	6.7	-	-	-	25 U	-
Phenanthrene	ug/L	0.93	-	-	-	10 U	-
Phenol	ug/L	110	-	-	-	10 U	-
Pyrene	ug/L	-	-	-	-	10 U	-
Metals							
Aluminum	ug/L	-	-	-	-	2990 K	-
Aluminum (Dissolved)	ug/L	87	-	12.3 B	-	50.9	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-N*	*STATION-N*
Sample ID:			*WS-7462-112007-RM-07*	*SW-7462-020808-MJW-003*	*SW-7462-030708-RM-31*	*SW-7462-120304-DJT-013*	*WS-7462-032707-RM-01*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/7/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	3.3 U	-
Antimony (Dissolved)	ug/L	30	-	2.3 U	-	3.3 U	-
Arsenic	ug/L	-	-	-	-	7.3 J	-
Arsenic (Dissolved)	ug/L	150	-	1.8 U	-	3.3	-
Barium	ug/L	-	-	-	-	70.2	-
Barium (Dissolved)	ug/L	438	-	39.9 J	-	40.7	-
Beryllium	ug/L	-	-	-	-	0.50	-
Beryllium (Dissolved)	ug/L	2.4	-	0.18 U	-	0.34	-
Cadmium	ug/L	-	-	-	-	0.67 B	-
Cadmium (Dissolved)	ug/L	0.25	-	**0.39 J**	-	**0.60**	-
Calcium	ug/L	-	-	-	55500	26100	-
Calcium (Dissolved)	ug/L	-	-	53300	-	24300	-
Chromium Total	ug/L	-	-	-	-	6.8 B	-
Chromium Total (Dissolved)	ug/L	11	-	3.0 B	-	1.7	-
Cobalt	ug/L	-	-	-	-	6.2	-
Cobalt (Dissolved)	ug/L	23	-	7.6 J	-	3.1	-
Copper	ug/L	-	-	-	-	6.5	-
Copper (Dissolved)	ug/L	9	-	1.6 B	-	2.5	-
Iron	ug/L	-	-	-	-	3800	-
Iron (Dissolved)	ug/L	320	-	61.6 B	-	63.2	-
Lead	ug/L	-	-	-	-	2.8 L	-
Lead (Dissolved)	ug/L	2.5	-	2.0 B	-	1.4 U	-
Magnesium	ug/L	-	-	-	-	13900	-
Magnesium (Dissolved)	ug/L	-	-	37400	-	12800	-
Manganese	ug/L	-	-	-	9630	2790	-
Manganese (Dissolved)	ug/L	120	-	**8680**	-	**2490**	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 U	0.10 U	0.17 L	0.10 UL
Mercury~E1631	ug/L	-	-	-	-	3.57	-
Mercury~SW7470	ug/L	-	0.45	0.52	0.63	1.5 J	1.0
Nickel	ug/L	-	-	-	-	12.2	-
Nickel (Dissolved)	ug/L	52	-	8.7 J	-	7.4	-
Potassium	ug/L	-	-	-	44500	22000 J	-
Potassium (Dissolved)	ug/L	-	-	40000	-	20900	-
Selenium	ug/L	-	-	-	-	2.4 UL	-
Selenium (Dissolved)	ug/L	4.6	-	2.4 U	-	2.4 U	-
Silver	ug/L	-	-	-	-	0.40 U	-
Silver (Dissolved)	ug/L	0.36	-	**1.2 J**	-	0.40 U	-
Sodium	ug/L	-	-	-	370000	155000	-
Sodium (Dissolved)	ug/L	-	-	350000	-	148000	-
Thallium	ug/L	-	-	-	-	3.1 U	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-M*	*STATION-M*	*STATION-M*	*STATION-N*	*STATION-N*
Sample ID:			*WS-7462-112007-RM-07*	*SW-7462-020808-MJW-003*	*SW-7462-030708-RM-31*	*SW-7462-120304-DJT-013*	*WS-7462-032707-RM-01*
Sample Date:			*11/20/2007*	*2/8/2008*	*3/7/2008*	*12/3/2004*	*3/27/2007*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	2.5 J	-	3.1 U	-
Vanadium	ug/L	-	-	-	-	14.4	-
Vanadium (Dissolved)	ug/L	12	-	1.6 J	-	3.0	-
Zinc	ug/L	-	-	-	-	71.3	-
Zinc (Dissolved)	ug/L	118.1	-	6.7 B	-	60.5	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	150000	-	-
Carbonate	ug/L	-	-	-	1000 U	-	-
Chloride	ug/L	230000	-	-	527000	-	-
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	7600	-
Sulfate	ug/L	-	-	-	262000	-	-
Total Organic Carbon (TOC)	ug/L	-	-	-	-	6700	-
Total Suspended Solids (TSS)	ug/L	-	-	-	21000	56000	-

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*
Sample ID:			*SW-7462-051707-RM-17*	*SW-7462-081507-MJW-07*	*WS-7462-112007-RM-08*	*SW-7462-020808-MJW-002*	*SW-7462-030708-RM-33*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	1 U	1 U	1 U	1 U	2 U
1,1,2,2-Tetrachloroethane	ug/L	2400	1 U	1 U	1 U	1 U	2 U
1,1,2-Trichloroethane	ug/L	87	1 U	1 U	1 U	1 U	2 U
1,1-Dichloroethane	ug/L	740	1 U	1 U	1 U	1 U	2 U
1,1-Dichloroethene	ug/L	25	1 U	1 U	1 U	1 U	2 U
1,2,4-Trichlorobenzene	ug/L	50	1 U	1 U	2.2	2.2	2
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	1 U	1 U	1 U	1 U	2 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	1 U	1 U	1 U	1 U	2 U
1,2-Dichlorobenzene	ug/L	14	1	2	**73**	11	**20**
1,2-Dichloroethane	ug/L	980	1 U	1 U	1 U	1 U	2 U
1,2-Dichloropropane	ug/L	525	1 U	1 U	1 U	1 U	2 U
1,3-Dichlorobenzene	ug/L	52	5	2	15	5.2	6
1,4-Dichlorobenzene	ug/L	16	2	7	**17**	4.6	13
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	5 U	5 B	5 U	4 J	3 J
Benzene	ug/L	98	9	3	18	0.7 U	7
Bromodichloromethane	ug/L	110	1 U	1 U	1 U	1 U	2 U
Bromoform	ug/L	320	1 U	1 U	1 U	1 U	2 U
Bromomethane (Methyl Bromide)	ug/L	110	1 UL	1 U	1 U	1 U	2 U
Carbon disulfide	ug/L	0.92	1 U	1 U	1 U	1 U	2 U
Carbon tetrachloride	ug/L	9.8	1 U	1 U	1.7	1 U	2 U
Chlorobenzene	ug/L	64	1	2	3.9	1.5	6
Chloroethane	ug/L	-	1 U	1 U	1 U	1 U	2 U
Chloroform (Trichloromethane)	ug/L	28	1 U	1 U	1 U	1 U	2 U
Chloromethane (Methyl Chloride)	ug/L	5500	1 U	1 U	1 U	1 U	2 U
cis-1,2-Dichloroethene	ug/L	590	1 U	1 U	1 U	1 U	2 U
cis-1,3-Dichloropropene	ug/L	0.055	1 U	1 U	1 U	1 U	2 U
Cyclohexane	ug/L	-	1 U	1 U	1 U	1 U	2 U
Dibromochloromethane	ug/L	110	1 U	1 U	1 U	1 U	2 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	1 U	1 U	1 U	1 U	2 U
Ethylbenzene	ug/L	110	1 U	1 U	1 U	1 U	2 U
Isopropylbenzene	ug/L	-	1 U	1 U	1 U	1 U	2 U
Methyl acetate	ug/L	-	1 U	1 U	1 U	1 U	2 U
Methyl cyclohexane	ug/L	-	1 U	1 U	1 U	1 U	2 U
Methyl Tert Butyl Ether	ug/L	-	1 U	1 U	1 U	1 U	2 U
Methylene chloride	ug/L	1500	1 U	1 U	1 U	1 U	2 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*
Sample ID:			*SW-7462-051707-RM-17*	*SW-7462-081507-MJW-07*	*WS-7462-112007-RM-08*	*SW-7462-020808-MJW-002*	*SW-7462-030708-RM-33*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	1 U	1 U	1 U	1 U	2 U
Tetrachloroethene	ug/L	60	1 U	1 U	1 U	1 U	2 U
Toluene	ug/L	94	1 U	1 U	1 U	1 U	2 U
trans-1,2-Dichloroethene	ug/L	1160	1 U	1 U	1 U	1 U	2 U
trans-1,3-Dichloropropene	ug/L	244	1 U	1 U	1 U	1 U	2 U
Trichloroethene	ug/L	47	1 U	1 U	1 U	1 U	2 U
Trichlorofluoromethane (CFC-11)	ug/L	110	1 U	1 U	1 U	1 U	2 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	1 U	1 U	1 U	1 U	2 U
Vinyl chloride	ug/L	930	1 U	1 U	1 U	1 U	2 U
Xylene (total)	ug/L	13	1 U	1 U	1 U	1 U	2 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	-	-
2,4-Dichlorophenol	ug/L	17	-	-	-	-	-
2,4-Dimethylphenol	ug/L	21	-	-	-	-	-
2,4-Dinitrophenol	ug/L	6	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	-	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	-	-
2-Chloronaphthalene	ug/L	16	-	-	-	-	-
2-Chlorophenol	ug/L	44	-	-	-	-	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	-	-
2-Methylphenol	ug/L	13	-	-	-	-	-
2-Nitroaniline	ug/L	49	-	-	-	-	-
2-Nitrophenol	ug/L	73	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	-	-
3-Nitroaniline	ug/L	9.8	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	-	-
4-Chloroaniline	ug/L	10	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-	-
4-Methylphenol	ug/L	-	-	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-	-	-
4-Nitrophenol	ug/L	58	-	-	-	-	-
Acenaphthene	ug/L	23	-	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-	-	-
Acetophenone	ug/L	-	-	-	-	-	-
Anthracene	ug/L	0.73	-	-	-	-	-
Atrazine	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*
Sample ID:			*SW-7462-051707-RM-17*	*SW-7462-081507-MJW-07*	*WS-7462-112007-RM-08*	*SW-7462-020808-MJW-002*	*SW-7462-030708-RM-33*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	-	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	-	-
Biphenyl	ug/L	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	-	-
Butyl benzylphthalate	ug/L	22	-	-	-	-	-
Caprolactam	ug/L	-	-	-	-	-	-
Carbazole	ug/L	9.3	-	-	-	-	-
Chrysene	ug/L	-	-	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-	-
Dibenzofuran	ug/L	3.7	-	-	-	-	-
Diethyl phthalate	ug/L	220	-	-	-	-	-
Dimethyl phthalate	ug/L	330	-	-	-	-	-
Di-n-butylphthalate	ug/L	33	-	-	-	-	-
Di-n-octyl phthalate	ug/L	3	-	-	-	-	-
Fluoranthene	ug/L	3.6	-	-	-	-	-
Fluorene	ug/L	2.4	-	-	-	-	-
Hexachlorobenzene	ug/L	3.68	-	-	-	-	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	-	-
Hexachloroethane	ug/L	12	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-	-
Isophorone	ug/L	830	-	-	-	-	-
Naphthalene	ug/L	12	-	-	-	-	-
Nitrobenzene	ug/L	220	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	-	-
Pentachlorophenol	ug/L	6.7	-	-	-	-	-
Phenanthrene	ug/L	0.93	-	-	-	-	-
Phenol	ug/L	110	-	-	-	-	-
Pyrene	ug/L	-	-	-	-	-	-
Metals							
Aluminum	ug/L	-	-	-	-	-	-
Aluminum (Dissolved)	ug/L	87	-	-	-	32.3 B	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*
Sample ID:			*SW-7462-051707-RM-17*	*SW-7462-081507-MJW-07*	*WS-7462-112007-RM-08*	*SW-7462-020808-MJW-002*	*SW-7462-030708-RM-33*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	-	-
Antimony (Dissolved)	ug/L	30	-	-	-	2.3 U	-
Arsenic	ug/L	-	-	-	-	-	-
Arsenic (Dissolved)	ug/L	150	-	-	-	1.8 U	-
Barium	ug/L	-	-	-	-	-	-
Barium (Dissolved)	ug/L	438	-	-	-	38.6 J	-
Beryllium	ug/L	-	-	-	-	-	-
Beryllium (Dissolved)	ug/L	2.4	-	-	-	0.96 J	-
Cadmium	ug/L	-	-	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	**1.0 J**	-
Calcium	ug/L	-	-	-	-	-	54400
Calcium (Dissolved)	ug/L	-	-	-	-	52100	-
Chromium Total	ug/L	-	-	-	-	-	-
Chromium Total (Dissolved)	ug/L	11	-	-	-	2.3 B	-
Cobalt	ug/L	-	-	-	-	-	-
Cobalt (Dissolved)	ug/L	23	-	-	-	5.6 J	-
Copper	ug/L	-	-	-	-	-	-
Copper (Dissolved)	ug/L	9	-	-	-	2.7 B	-
Iron	ug/L	-	-	-	-	-	-
Iron (Dissolved)	ug/L	320	-	-	-	52.3 B	-
Lead	ug/L	-	-	-	-	-	-
Lead (Dissolved)	ug/L	2.5	-	-	-	2.0 B	-
Magnesium	ug/L	-	-	-	-	-	-
Magnesium (Dissolved)	ug/L	-	-	-	-	35700	-
Manganese	ug/L	-	-	-	-	-	9510
Manganese (Dissolved)	ug/L	120	-	-	-	**7570**	-
Mercury (Dissolved)	ug/L	0.77	0.10 J	0.10 U	0.10 U	0.10 U	0.10 U
Mercury~E1631	ug/L	-	-	-	-	-	-
Mercury~SW7470	ug/L	-	0.47	0.57	0.25	0.90	0.86
Nickel	ug/L	-	-	-	-	-	-
Nickel (Dissolved)	ug/L	52	-	-	-	8.5 J	-
Potassium	ug/L	-	-	-	-	-	42200
Potassium (Dissolved)	ug/L	-	-	-	-	39500	-
Selenium	ug/L	-	-	-	-	-	-
Selenium (Dissolved)	ug/L	4.6	-	-	-	2.4 U	-
Silver	ug/L	-	-	-	-	-	-
Silver (Dissolved)	ug/L	0.36	-	-	-	**1.5 J**	-
Sodium	ug/L	-	-	-	-	-	359000
Sodium (Dissolved)	ug/L	-	-	-	-	334000	-
Thallium	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*	*STATION-N*
Sample ID:			*SW-7462-051707-RM-17*	*SW-7462-081507-MJW-07*	*WS-7462-112007-RM-08*	*SW-7462-020808-MJW-002*	*SW-7462-030708-RM-33*
Sample Date:			*5/17/2007*	*8/15/2007*	*11/20/2007*	*2/8/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	-	-	4.8 J	-
Vanadium	ug/L	-	-	-	-	-	-
Vanadium (Dissolved)	ug/L	12	-	-	-	2.5 J	-
Zinc	ug/L	-	-	-	-	-	-
Zinc (Dissolved)	ug/L	118.1	-	-	-	3.9 U	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	-	-	-	-	156000
Carbonate	ug/L	-	-	-	-	-	1000 U
Chloride	ug/L	230000	-	-	-	-	515000
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	-	-
Sulfate	ug/L	-	-	-	-	-	265000
Total Organic Carbon (TOC)	ug/L	-	-	-	-	-	-
Total Suspended Solids (TSS)	ug/L	-	-	-	-	-	23000

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-S*	*STATION-T*	*STATION-U*	*STATION-V*	*STATION-W*
Sample ID:			*SW-7462-030608-RM-03*	*SW-7462-030608-RM-05*	*SW-7462-030608-RM-07*	*SW-7462-030608-RM-09*	*SW-7462-030708-RM-21*
Sample Date:			*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	410	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	ug/L	2400	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	ug/L	87	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	ug/L	740	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	ug/L	25	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	ug/L	50	2 U	2 U	1 J	1 J	40
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	2 U	2 U	2 U	2 U	2 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	ug/L	14	3	1 J	5	6	**210**
1,2-Dichloroethane	ug/L	980	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	ug/L	525	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	ug/L	52	2 U	2 U	1 J	1 J	**74**
1,4-Dichlorobenzene	ug/L	16	1 B	2 U	2 B	3 B	**260**
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	2 J	3 J	3 J	3 J	3 J
Benzene	ug/L	98	0.7 U	0.7 U	0.7 U	0.7 U	18
Bromodichloromethane	ug/L	110	2 U	2 U	2 U	2 U	2 U
Bromoform	ug/L	320	2 U	2 U	2 U	2 U	2 U
Bromomethane (Methyl Bromide)	ug/L	110	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	ug/L	0.92	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	ug/L	9.8	7	5	4	7	3
Chlorobenzene	ug/L	64	2 U	2 U	2 U	2 U	**290**
Chloroethane	ug/L	-	2 U	2 U	2 U	2 U	2 U
Chloroform (Trichloromethane)	ug/L	28	5	4	3	5	1 J
Chloromethane (Methyl Chloride)	ug/L	5500	2 U	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	ug/L	590	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	ug/L	0.055	2 U	2 U	2 U	2 U	2 U
Cyclohexane	ug/L	-	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	ug/L	110	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	ug/L	110	2 U	2 U	2 U	2 U	2 U
Isopropylbenzene	ug/L	-	2 U	2 U	2 U	2 U	2 U
Methyl acetate	ug/L	-	2 U	2 U	2 U	2 U	2 U
Methyl cyclohexane	ug/L	-	2 U	2 U	2 U	2 U	2 U
Methyl Tert Butyl Ether	ug/L	-	2 U	2 U	2 U	2 U	2 U
Methylene chloride	ug/L	1500	2 U	2 U	2 U	2 U	2 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-S*	*STATION-T*	*STATION-U*	*STATION-V*	*STATION-W*
Sample ID:			*SW-7462-030608-RM-03*	*SW-7462-030608-RM-05*	*SW-7462-030608-RM-07*	*SW-7462-030608-RM-09*	*SW-7462-030708-RM-21*
Sample Date:			*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Styrene	ug/L	241	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	ug/L	60	10	14	6	7	1 J
Toluene	ug/L	94	2 U	2 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	ug/L	1160	2 U	2 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	ug/L	244	2 U	2 U	2 U	2 U	2 U
Trichloroethene	ug/L	47	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane (CFC-11)	ug/L	110	2 U	2 U	2 U	2 U	2 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	ug/L	930	2 U	2 U	2 U	2 U	2 U
Xylene (total)	ug/L	13	2 U	2 U	2 U	2 U	2 U
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	-	-
2,4-Dichlorophenol	ug/L	17	-	-	-	-	-
2,4-Dimethylphenol	ug/L	21	-	-	-	-	-
2,4-Dinitrophenol	ug/L	6	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	-	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	-	-
2-Chloronaphthalene	ug/L	16	-	-	-	-	-
2-Chlorophenol	ug/L	44	-	-	-	-	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	-	-
2-Methylphenol	ug/L	13	-	-	-	-	-
2-Nitroaniline	ug/L	49	-	-	-	-	-
2-Nitrophenol	ug/L	73	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	-	-
3-Nitroaniline	ug/L	9.8	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	-	-
4-Chloroaniline	ug/L	10	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-	-
4-Methylphenol	ug/L	-	-	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-	-	-
4-Nitrophenol	ug/L	58	-	-	-	-	-
Acenaphthene	ug/L	23	-	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-	-	-
Acetophenone	ug/L	-	-	-	-	-	-
Anthracene	ug/L	0.73	-	-	-	-	-
Atrazine	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-S*	*STATION-T*	*STATION-U*	*STATION-V*	*STATION-W*
Sample ID:			*SW-7462-030608-RM-03*	*SW-7462-030608-RM-05*	*SW-7462-030608-RM-07*	*SW-7462-030608-RM-09*	*SW-7462-030708-RM-21*
Sample Date:			*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Benzaldehyde	ug/L	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	-	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	-	-
Biphenyl	ug/L	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	-	-
Butyl benzylphthalate	ug/L	22	-	-	-	-	-
Caprolactam	ug/L	-	-	-	-	-	-
Carbazole	ug/L	9.3	-	-	-	-	-
Chrysene	ug/L	-	-	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-	-
Dibenzofuran	ug/L	3.7	-	-	-	-	-
Diethyl phthalate	ug/L	220	-	-	-	-	-
Dimethyl phthalate	ug/L	330	-	-	-	-	-
Di-n-butylphthalate	ug/L	33	-	-	-	-	-
Di-n-octyl phthalate	ug/L	3	-	-	-	-	-
Fluoranthene	ug/L	3.6	-	-	-	-	-
Fluorene	ug/L	2.4	-	-	-	-	-
Hexachlorobenzene	ug/L	3.68	-	-	-	-	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	-	-
Hexachloroethane	ug/L	12	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-	-
Isophorone	ug/L	830	-	-	-	-	-
Naphthalene	ug/L	12	-	-	-	-	-
Nitrobenzene	ug/L	220	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	-	-
Pentachlorophenol	ug/L	6.7	-	-	-	-	-
Phenanthrene	ug/L	0.93	-	-	-	-	-
Phenol	ug/L	110	-	-	-	-	-
Pyrene	ug/L	-	-	-	-	-	-
Metals							
Aluminum	ug/L	-	-	-	-	-	-
Aluminum (Dissolved)	ug/L	87	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-S*	*STATION-T*	*STATION-U*	*STATION-V*	*STATION-W*
Sample ID:			*SW-7462-030608-RM-03*	*SW-7462-030608-RM-05*	*SW-7462-030608-RM-07*	*SW-7462-030608-RM-09*	*SW-7462-030708-RM-21*
Sample Date:			*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Antimony	ug/L	-	-	-	-	-	-
Antimony (Dissolved)	ug/L	30	-	-	-	-	-
Arsenic	ug/L	-	-	-	-	-	-
Arsenic (Dissolved)	ug/L	150	-	-	-	-	-
Barium	ug/L	-	-	-	-	-	-
Barium (Dissolved)	ug/L	438	-	-	-	-	-
Beryllium	ug/L	-	-	-	-	-	-
Beryllium (Dissolved)	ug/L	2.4	-	-	-	-	-
Cadmium	ug/L	-	-	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-	-
Calcium	ug/L	-	21400	19200	24200	24600	58300
Calcium (Dissolved)	ug/L	-	-	-	-	-	-
Chromium Total	ug/L	-	-	-	-	-	-
Chromium Total (Dissolved)	ug/L	11	-	-	-	-	-
Cobalt	ug/L	-	-	-	-	-	-
Cobalt (Dissolved)	ug/L	23	-	-	-	-	-
Copper	ug/L	-	-	-	-	-	-
Copper (Dissolved)	ug/L	9	-	-	-	-	-
Iron	ug/L	-	-	-	-	-	-
Iron (Dissolved)	ug/L	320	-	-	-	-	-
Lead	ug/L	-	-	-	-	-	-
Lead (Dissolved)	ug/L	2.5	-	-	-	-	-
Magnesium	ug/L	-	-	-	-	-	-
Magnesium (Dissolved)	ug/L	-	-	-	-	-	-
Manganese	ug/L	-	892	512	1360	1390	9330
Manganese (Dissolved)	ug/L	120	-	-	-	-	-
Mercury (Dissolved)	ug/L	0.77	**1.3**	**3.4**	**1.9**	**1.7**	0.10 U
Mercury~E1631	ug/L	-	-	-	-	-	-
Mercury~SW7470	ug/L	-	11.1	22.2	7.0	7.8	0.27
Nickel	ug/L	-	-	-	-	-	-
Nickel (Dissolved)	ug/L	52	-	-	-	-	-
Potassium	ug/L	-	89100	79600	81900	105000	45900
Potassium (Dissolved)	ug/L	-	-	-	-	-	-
Selenium	ug/L	-	-	-	-	-	-
Selenium (Dissolved)	ug/L	4.6	-	-	-	-	-
Silver	ug/L	-	-	-	-	-	-
Silver (Dissolved)	ug/L	0.36	-	-	-	-	-
Sodium	ug/L	-	347000	273000	348000	440000	430000
Sodium (Dissolved)	ug/L	-	-	-	-	-	-
Thallium	ug/L	-	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-S*	*STATION-T*	*STATION-U*	*STATION-V*	*STATION-W*
Sample ID:			*SW-7462-030608-RM-03*	*SW-7462-030608-RM-05*	*SW-7462-030608-RM-07*	*SW-7462-030608-RM-09*	*SW-7462-030708-RM-21*
Sample Date:			*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/6/2008*	*3/7/2008*
Parameters	*Units*	*Surface Water ESV*					
Thallium (Dissolved)	ug/L	6	-	-	-	-	-
Vanadium	ug/L	-	-	-	-	-	-
Vanadium (Dissolved)	ug/L	12	-	-	-	-	-
Zinc	ug/L	-	-	-	-	-	-
Zinc (Dissolved)	ug/L	118.1	-	-	-	-	-
General Chemistry							
Alkalinity, Total (as CaCO3)	ug/L	-	82200	89800	91000	98800	122000
Carbonate	ug/L	-	1000 U	1000 U	1000 U	1000 U	1000 U
Chloride	ug/L	230000	455000	560000	597000	830000	684000
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	-	-
Sulfate	ug/L	-	114000	124000	139000	147000	188000
Total Organic Carbon (TOC)	ug/L	-	-	-	-	-	-
Total Suspended Solids (TSS)	ug/L	-	4000 U	9000	5000	6000	12000

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-X*	*STATION-X*	*STATION-Y*	*STATION-Z*
Sample ID:			*SW-7462-030708-RM-23*	*SW-7462-030708-RM-25*	*SW-7462-030708-RM-27*	*SW-7462-030708-RM-29*
Sample Date:			*3/7/2008*	*3/7/2008*	*3/7/2008*	*3/7/2008*
				(Duplicate)		
Parameters	*Units*	*Surface Water ESV*				
Volatile Organic Compounds						
1,1,1-Trichloroethane	ug/L	410	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	ug/L	2400	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	ug/L	87	2 U	2 U	2 U	2 U
1,1-Dichloroethane	ug/L	740	2 U	2 U	2 U	2 U
1,1-Dichloroethene	ug/L	25	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	ug/L	50	24	26	8	6
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	2 U	2 U	2 U	2 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	180	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	ug/L	14	**170**	**170**	**120**	**170**
1,2-Dichloroethane	ug/L	980	2 U	2 U	2 U	2 U
1,2-Dichloropropane	ug/L	525	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	ug/L	52	33	33	20	**53**
1,4-Dichlorobenzene	ug/L	16	**190**	**190**	**150**	**360**
2-Butanone (Methyl Ethyl Ketone)	ug/L	14000	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	99	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	170	5 U	5 U	5 U	5 U
Acetone	ug/L	1500	3 J	4 J	4 J	6
Benzene	ug/L	98	24	25	**130**	**1400**
Bromodichloromethane	ug/L	110	2 U	2 U	2 U	2 U
Bromoform	ug/L	320	2 U	2 U	2 U	2 U
Bromomethane (Methyl Bromide)	ug/L	110	2 U	2 U	2 U	2 U
Carbon disulfide	ug/L	0.92	2 U	2 U	2 U	2 U
Carbon tetrachloride	ug/L	9.8	4	4	2 U	2 U
Chlorobenzene	ug/L	64	**110**	**120**	**180**	**2600**
Chloroethane	ug/L	-	2 U	2 U	2 U	2 U
Chloroform (Trichloromethane)	ug/L	28	1 J	1 J	2 U	2 U
Chloromethane (Methyl Chloride)	ug/L	5500	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	ug/L	590	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	ug/L	0.055	2 U	2 U	2 U	2 U
Cyclohexane	ug/L	-	2 U	2 U	2 U	2
Dibromochloromethane	ug/L	110	2 U	2 U	2 U	2 U
Dichlorodifluoromethane (CFC-12)	ug/L	110	2 U	2 U	2 U	2 U
Ethylbenzene	ug/L	110	2 U	2 U	2 U	2 U
Isopropylbenzene	ug/L	-	2 U	2 U	2 U	2 U
Methyl acetate	ug/L	-	2 U	2 U	2 U	2 U
Methyl cyclohexane	ug/L	-	2 U	2 U	2 U	2 U
Methyl Tert Butyl Ether	ug/L	-	2 U	2 U	2 U	2 U
Methylene chloride	ug/L	1500	2 U	2 U	2 U	2 U

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-X*	*STATION-X*	*STATION-Y*	*STATION-Z*
Sample ID:			*SW-7462-030708-RM-23*	*SW-7462-030708-RM-25*	*SW-7462-030708-RM-27*	*SW-7462-030708-RM-29*
Sample Date:			*3/7/2008*	*3/7/2008*	*3/7/2008*	*3/7/2008*
				(Duplicate)		
Parameters	*Units*	*Surface Water ESV*				
Styrene	ug/L	241	2 U	2 U	2 U	2 U
Tetrachloroethene	ug/L	60	2	2	2 U	2 U
Toluene	ug/L	94	2 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	ug/L	1160	2 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	ug/L	244	2 U	2 U	2 U	2 U
Trichloroethene	ug/L	47	2 U	2 U	2 U	2 U
Trichlorofluoromethane (CFC-11)	ug/L	110	2 U	2 U	2 U	2 U
Trifluorotrichloroethane (Freon 113)	ug/L	-	2 U	2 U	2 U	2 U
Vinyl chloride	ug/L	930	2 U	2 U	3	3
Xylene (total)	ug/L	13	2 U	2 U	2 U	2 U
Semi-volatile Organic Compounds						
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	1.9	-	-	-	-
2,4,6-Trichlorophenol	ug/L	1.4	-	-	-	-
2,4-Dichlorophenol	ug/L	17	-	-	-	-
2,4-Dimethylphenol	ug/L	21	-	-	-	-
2,4-Dinitrophenol	ug/L	6	-	-	-	-
2,4-Dinitrotoluene	ug/L	230	-	-	-	-
2,6-Dinitrotoluene	ug/L	60	-	-	-	-
2-Chloronaphthalene	ug/L	16	-	-	-	-
2-Chlorophenol	ug/L	44	-	-	-	-
2-Methylnaphthalene	ug/L	14.2	-	-	-	-
2-Methylphenol	ug/L	13	-	-	-	-
2-Nitroaniline	ug/L	49	-	-	-	-
2-Nitrophenol	ug/L	73	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	10.5	-	-	-	-
3-Nitroaniline	ug/L	9.8	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	2.3	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	1.5	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0.3	-	-	-	-
4-Chloroaniline	ug/L	10	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-
4-Methylphenol	ug/L	-	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-	-
4-Nitrophenol	ug/L	58	-	-	-	-
Acenaphthene	ug/L	23	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-	-
Acetophenone	ug/L	-	-	-	-	-
Anthracene	ug/L	0.73	-	-	-	-
Atrazine	ug/L	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-X*	*STATION-X*	*STATION-Y*	*STATION-Z*
Sample ID:			*SW-7462-030708-RM-23*	*SW-7462-030708-RM-25*	*SW-7462-030708-RM-27*	*SW-7462-030708-RM-29*
Sample Date:			*3/7/2008*	*3/7/2008*	*3/7/2008*	*3/7/2008*
				(Duplicate)		
Parameters	*Units*	*Surface Water ESV*				
Benzaldehyde	ug/L	-	-	-	-	-
Benzo(a)anthracene	ug/L	0.025	-	-	-	-
Benzo(a)pyrene	ug/L	0.014	-	-	-	-
Benzo(b)fluoranthene	ug/L	10.24	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	-
Biphenyl	ug/L	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	1100	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	2380	-	-	-	-
bis(2-Ethylhexyl)phthalate	ug/L	3	-	-	-	-
Butyl benzylphthalate	ug/L	22	-	-	-	-
Caprolactam	ug/L	-	-	-	-	-
Carbazole	ug/L	9.3	-	-	-	-
Chrysene	ug/L	-	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-
Dibenzofuran	ug/L	3.7	-	-	-	-
Diethyl phthalate	ug/L	220	-	-	-	-
Dimethyl phthalate	ug/L	330	-	-	-	-
Di-n-butylphthalate	ug/L	33	-	-	-	-
Di-n-octyl phthalate	ug/L	3	-	-	-	-
Fluoranthene	ug/L	3.6	-	-	-	-
Fluorene	ug/L	2.4	-	-	-	-
Hexachlorobenzene	ug/L	3.68	-	-	-	-
Hexachlorobutadiene	ug/L	9.3	-	-	-	-
Hexachlorocyclopentadiene	ug/L	5.2	-	-	-	-
Hexachloroethane	ug/L	12	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-
Isophorone	ug/L	830	-	-	-	-
Naphthalene	ug/L	12	-	-	-	-
Nitrobenzene	ug/L	220	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	25	-	-	-	-
Pentachlorophenol	ug/L	6.7	-	-	-	-
Phenanthrene	ug/L	0.93	-	-	-	-
Phenol	ug/L	110	-	-	-	-
Pyrene	ug/L	-	-	-	-	-
Metals						
Aluminum	ug/L	-	-	-	-	-
Aluminum (Dissolved)	ug/L	87	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-X*	*STATION-X*	*STATION-Y*	*STATION-Z*
Sample ID:			*SW-7462-030708-RM-23*	*SW-7462-030708-RM-25*	*SW-7462-030708-RM-27*	*SW-7462-030708-RM-29*
Sample Date:			*3/7/2008*	*3/7/2008*	*3/7/2008*	*3/7/2008*
				(Duplicate)		
Parameters	*Units*	*Surface Water ESV*				
Antimony	ug/L	-	-	-	-	-
Antimony (Dissolved)	ug/L	30	-	-	-	-
Arsenic	ug/L	-	-	-	-	-
Arsenic (Dissolved)	ug/L	150	-	-	-	-
Barium	ug/L	-	-	-	-	-
Barium (Dissolved)	ug/L	438	-	-	-	-
Beryllium	ug/L	-	-	-	-	-
Beryllium (Dissolved)	ug/L	2.4	-	-	-	-
Cadmium	ug/L	-	-	-	-	-
Cadmium (Dissolved)	ug/L	0.25	-	-	-	-
Calcium	ug/L	-	53300	53100	56000	55000
Calcium (Dissolved)	ug/L	-	-	-	-	-
Chromium Total	ug/L	-	-	-	-	-
Chromium Total (Dissolved)	ug/L	11	-	-	-	-
Cobalt	ug/L	-	-	-	-	-
Cobalt (Dissolved)	ug/L	23	-	-	-	-
Copper	ug/L	-	-	-	-	-
Copper (Dissolved)	ug/L	9	-	-	-	-
Iron	ug/L	-	-	-	-	-
Iron (Dissolved)	ug/L	320	-	-	-	-
Lead	ug/L	-	-	-	-	-
Lead (Dissolved)	ug/L	2.5	-	-	-	-
Magnesium	ug/L	-	-	-	-	-
Magnesium (Dissolved)	ug/L	-	-	-	-	-
Manganese	ug/L	-	8860	8830	9710	8940
Manganese (Dissolved)	ug/L	120	-	-	-	-
Mercury (Dissolved)	ug/L	0.77	0.10 U	0.10 U	0.10 U	0.10 U
Mercury~E1631	ug/L	-	-	-	-	-
Mercury~SW7470	ug/L	-	1.4	1.1	0.53	1.3
Nickel	ug/L	-	-	-	-	-
Nickel (Dissolved)	ug/L	52	-	-	-	-
Potassium	ug/L	-	42600	42000	44600	44100
Potassium (Dissolved)	ug/L	-	-	-	-	-
Selenium	ug/L	-	-	-	-	-
Selenium (Dissolved)	ug/L	4.6	-	-	-	-
Silver	ug/L	-	-	-	-	-
Silver (Dissolved)	ug/L	0.36	-	-	-	-
Sodium	ug/L	-	372000	368000	372000	370000
Sodium (Dissolved)	ug/L	-	-	-	-	-
Thallium	ug/L	-	-	-	-	-

ANALYTICAL RESULTS SUMMARY
AOC 8 SURFACE WATER SAMPLING
ALL DATA SCREENED TO SURFACE WATER ESV
GLENN SPRINGS HOLDINGS, INC.
DELAWARE CITY

Sample Location:			*STATION-X*	*STATION-X*	*STATION-Y*	*STATION-Z*
Sample ID:			*SW-7462-030708-RM-23*	*SW-7462-030708-RM-25*	*SW-7462-030708-RM-27*	*SW-7462-030708-RM-29*
Sample Date:			*3/7/2008*	*3/7/2008*	*3/7/2008*	*3/7/2008*
				(Duplicate)		
Parameters	*Units*	*Surface Water ESV*				
Thallium (Dissolved)	ug/L	6	-	-	-	-
Vanadium	ug/L	-	-	-	-	-
Vanadium (Dissolved)	ug/L	12	-	-	-	-
Zinc	ug/L	-	-	-	-	-
Zinc (Dissolved)	ug/L	118.1	-	-	-	-
General Chemistry						
Alkalinity, Total (as CaCO3)	ug/L	-	130000	122000	154000	150000
Carbonate	ug/L	-	1000 U	1000 U	1000 U	1000 U
Chloride	ug/L	230000	**543000**	**545000**	**523000**	**529000**
Dissolved Organic Carbon (DOC)	ug/L	-	-	-	-	-
Sulfate	ug/L	-	256000	257000	273000	291000
Total Organic Carbon (TOC)	ug/L	-	-	-	-	-
Total Suspended Solids (TSS)	ug/L	-	20000	20000	29000	35000

Notes:
B - Not detected substantially above the level reported in laboratory or field blanks.
J - Estimated concentration.
K - High bias.
L - Low bias.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
UL - Not present at or above the associated value. Low bias.
- Not analyzed.
Only dissolved metals were screened.

APPENDIX B

AOC 8- ALTERNATIVES COST ESTIMATES

SUMMARY
AOC 8 - TRIBUTARY
REMEDIAL ALTERNATIVES COST ESTIMATES
GSHI, DELAWARE CITY FACILITY

Alternative	Estimated Cost ($2008)
Alternative 1: Long-Term Monitoring	$70,000
Alternative 2: Engineered Capping	$3,100,000
Alternative 3: Dredging and Backfilling	$4,700,000
Alternative 4: Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	$4,600,000
Alternative 5: Dredging and Reactive Capping (East Trib.) & Dredging and Backfilling (West Trib.)	$5,800,000

Source: CRA Inc. (Project No. 007462-99912 Draft CMS Report 47; Section 4.26 AOC 8; August 2008; Anchor Environmental, L.L.C.)

GENERAL COMMENTS
AOC 8 - TRIBUTARY
REMEDIAL ALTERNATIVES COST ESTIMATES
GSHI, DELAWARE CITY FACILITY

- For the purposes of this estimate, the edge of water/marsh boundary is considered as the outer bound of the remedial area.
- This cost estimate has been developed at a detailed analysis of alternatives feasibility study level at an accuracy of -30 to +50%, in accordance with USEPA guidance (USEPA, July 2000).
- Costs are rounded off as appropriate.
- This alternative and its corresponding costs have been developed based upon information provided by Glenn Springs Holdings, Inc., (GSHI), on behalf of Occidental Chemical Corporation (OxyChem), and CRA, as well as professional judgment and experience from other similar projects.
- All costs have been provided in 2008 dollars and include material and labor unless otherwise noted. Unit costs are estimated using standard estimating guides (e.g., Means Site Work and Landscape Cost Data), vendors, professional judgment, and experience from similar projects.
- Costs do not include property costs (where applicable), access costs, permitting costs, legal fees, Agency oversight, or public relations efforts.
- These estimates are developed using current and generally accepted engineering cost estimation methods. Note that these estimates are based on assumptions concerning future events and actual costs may be affected by known and unknown risks including, but not limited to, changes in general economic and business conditions, site conditions that were unknown to Anchor Environmental at the time the estimates were performed, future changes in site conditions, regulatory or enforcement policy changes, and delays in performance. Actual costs may vary from these estimates and such variations may be material. Anchor Environmental is not licensed as accountants or securities attorneys and, therefore, make no representations that these costs form an appropriate basis for complying with financial reporting requirements for such costs.
- This estimate is based on our current understanding of the site and the resulting conceptual development of remedial options At the time this cost estimate was prepared, some detailed information (e.g., geotechnical data, geo-chemistry, stormwater/flooding, etc.) was not available for review. These estimates should therefore be considered preliminary and will be subject to revision as additional data and information becomes available as part of design related investigations. The concepts shown in these estimates will also be likely optimized as part of remedial design.

Source: CRA Inc. (Project No. 007462-99912 Draft CMS Report 47; Section 4.26 AOC 8; August 2008; Anchor Environmental, L.L.C.)

PRESENT WORTH ANALYSIS
AOC 8 - ALTERNATIVE 1
LONG-TERM MONITORING
GSHI, DELAWARE CITY FACILITY

ITEM NO.	DESCRIPTION	UNIT	NO. OF UNITS	ESTIMATED UNIT COST (2008$)	ESTIMATED COST (2008$)
1	Mobilization/Demobilization	LS	1	$0	$0
2	Staging Area Development/Restoration	LS	1	$0	$0
3	Institutional Controls	LS	1	$0	$0

Construction Total:	$0
4. Engineering Design (15%):	$0
5. Contingency (30%):	$0
6. Long-Term Operating, Monitoring, and Maintenance (OM&M) Program (Present Worth):	$69,000
Total (2008 $):	$69,000
Rounded Total (2008 $):	$70,000

ALTERNATIVE 1 - LONG-TERM MONITORING

- This alternative includes implementing long-term monitoring program to safely allow the tributary area to recover naturally.

Notes and Assumptions:

1. The long-term OM&M program is expected to include monitoring of the tributary area to check for natural recovery. Sediment and water column sampling is anticipated for the 1st, 3rd, 5th, and every 5 years thereafter for a duration of 30 years. The estimated cost for the long-term monitoring program was calculated using the present worth analysis process outlined by the USEPA (USEPA, July 2000) at a discounted rate of 5%.

Source: CRA Inc. (Project No. 007462-99912 Draft CMS Report 47; Section 4.26 AOC 8; August 2008; Anchor Environmental, L.L.C.)

PRESENT WORTH ANALYSIS
AOC 8 - ALTERNATIVE 2
ENGINEERED CAPPING
GSHI, DELAWARE CITY FACILITY

ITEM NO.	DESCRIPTION	UNIT	NO. OF UNITS	ESTIMATED UNIT COST (2008$)	ESTIMATED COST (2008$)
1	Pre-Design Investigation	LS	1	$375,000	$375,000
2	Mobilization/Demobilization	LS	1	$117,000	$117,000
3	Staging Area Development/Restoration	LS	1	$150,000	$150,000
4	Dewatering/Water Diversion	LS	1	$300,000	$300,000
5	Organoclay Reactive Cap (Eastern Trib.)	SF	152,000	$4	$608,000
	Enhanced Sand Cap (Western Trib.)	CY	1,900	$60	$114,000
6	Clean Sand Cap (Eastern Trib.)	CY	2,600	$36	$95,000
7	Construction Monitoring/ Oversight	LS	3	$100,000	$300,000
				Construction Total:	$2,059,000
				8. Engineering Design (15%):	$309,000
				9. Contingency (30%):	$618,000
				10. Long-Term Operating, Monitoring, and Maintenance (OM&M) Program (Present Worth):	$112,300
				Total (2008 $):	$3,098,300
				Rounded Total (2008 $):	$3,100,000

ALTERNATIVE 2 - ENGINEERED CAPPING

- This alternative includes placement of an enhanced sand/organoclay reactive cap over the entire Eastern Tributary Area (3.17 acres) and placement of an enhanced sand cap over the entire Western Tributary Area (0.97 acres).

Notes and Assumptions:

1. Additional investigative studies will be performed prior to implementation of this alternative to obtain site-specific information (e.g., bathymetric surveys, geotechnical sampling, water column testing, geochemical analysis, habitat surveys and cap design studies).
2. Includes mobilization and demobilization of labor, equipment, and materials necessary to implement the alternative as described above. The mobilization/demobilization cost has been estimated at 10% of the total construction cost. It is estimated that work can be completed in three months. It is assumed that work will be conducted 12 hours per day, 5 days per week.
3. Staging area development/restoration includes clearing, grubbing, and preparation of the area for use during construction activities. It is assumed that land located adjacent to the tributary will be used for stockpiling cap materials. Restoration will include removal and disposal of gravel and fill where necessary, followed by topsoil and vegetation as appropriate.
4. Dewatering and water diversion will include diverting water from the tributary and using sumps/pumps to keep the area dewatered 24 hours per day, 7 days per week.
5. The in situ cap will consist of an organoclay reactive mat in the eastern tributary, and an enhanced sand cap (containing approximately 1-2% total organic carbon, or alternate Mercury specific media) in the western tributary. It is anticipated that the mat can be placed at a rate of approximately 10,000 sf/day, and sand will be placed using mechanical means (i.e., telescoping belt conveyor, backhoe, etc.) at a rate of approximately 300 cy/day. The cap materials will be transported via truck to the staging area. The cap costs include transport, purchase, and placement of materials. It is assumed that 10% additional mat will be needed for overlap and 20% additional sand will be required to achieve adequate coverage.
6. A 3" layer of clean sand (with an additional 3" overplacement allowance) will be placed in the eastern tributary on top of the reactive matting to help secure the cap.
7. Construction monitoring/oversight includes daily oversight of construction activities and is assumed to be conducted during all activities. It is envisioned that the construction monitoring/oversight would include water column monitoring, cap material sampling, and cap material thickness measurements. Best management practices will be employed to control turbidity during capping activities. Estimate duration includes a 25% reduction in productivity rates due to shallow nature of the work area.
8. Engineering fees typically range between 7 to 15% of remediation costs as recommended by the USEPA in *Remedial Action Costing Procedures Manual*, 600/8-87-049 (USEPA, 1987), and *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, EPA 540-R-00-002 (USEPA, 2000). For the purposes of this estimate, a value of 15% has been used.
9. A contingency allowance has been included to account for unforeseen circumstances or variability in the material types, volumes, labor, and/or material costs. The contingency typically ranges from 15 to 25% of the remediation costs as recommended by the USEPA (USEPA, 1987, and USEPA, 2000). For the purposes of this estimate, a value of 30% has been used.
10. The long-term OM&M program is expected to include monitoring of the capped area to check the integrity of the placed materials. Post-placement cap thickness will be measured after construction. Cap and water column sampling is anticipated for the 1st, 3rd, 5th, and every 5 years thereafter for a duration of 30 years. It is assumed that cap maintenance will be required once every 5 years (estimated at 1% of the total cap construction cost) for a duration of 30 years. The estimated cost for the long-term monitoring program was calculated using the present worth analysis process outlined by the USEPA (USEPA, July 2000) at a discounted rate of 5%.

Source: CRA Inc. (Project No. 007462-99912 Draft CMS Report 47; Section 4.26 AOC 8; August 2008; Anchor Environmental, L.L.C.)

PRESENT WORTH ANALYSIS
AOC 8 - ALTERNATIVE 3
DREDGING AND BACKFILLING
GSHI, DELAWARE CITY FACILITY

ITEM NO.	DESCRIPTION	UNIT	NO. OF UNITS	ESTIMATED UNIT COST (2008$)	ESTIMATED COST (2008$)
1	Pre-Design Investigation	LS	1	$225,000	$225,000
2	Mobilization/Demobilization	LS	1	$249,000	$249,000
3	Staging Area Development/Restoration	LS	1	$150,000	$150,000
4	Dewatering/Water Diversion	LS	1	$300,000	$300,000
5	Water Treatment	GAL	2,806,000	$0.15	$421,000
6	Dredging & Material Transport to Cell 3	CY	7,700	$75	$578,000
7	Cell 3 Construction and Closure	LS	1	$750,000	$750,000
8	Backfilling	CY	8,100	$36	$295,000
9	Construction Monitoring/ Oversight	LS	3	$100,000	$300,000
				Construction Total:	$3,268,000
				10. Engineering Design (15%):	$490,000
				11. Contingency (30%):	$980,000
				Total (2008 $):	$4,738,000
				Rounded Total (2008 $):	$4,700,000

ALTERNATIVE 3 - DREDGING AND BACKFILLING

· This alternative includes dredging to a depth of 6" (with an additional 6" overdredge allowance) over the entire tributary area (4.14 acres) and placing a 6" clean sand backfill layer (with a 6" additional overplacement allowance) over all dredged areas.

Notes and Assumptions:

1. Additional investigative studies will be performed prior to implementation of this alternative to obtain site-specific information (e.g., bathymetric surveys, geotechnical sampling, water column testing, geochemical analysis, habitat surveys and cap design studies).
2. Includes mobilization and demobilization of labor, equipment, and materials necessary to implement the alternative as described above. The mobilization/demobilization cost has been estimated at 10% of the total construction cost. It is estimated that work can be completed in three months. It is assumed that work will be conducted 12 hours per day, 5 days per week.
3. Staging area development/restoration includes clearing, grubbing, and preparation of the area for use during construction activities. It is assumed that land located adjacent to the tributary will be used for stockpiling cap materials. Restoration will include removal and disposal of gravel and fill where necessary, followed by topsoil and vegetation as appropriate.
4. Dewatering and water diversion will include diverting water from the tributary and using sumps/pumps to keep the area dewatered 24 hours per day, 7 days per week.
5. Water treatment includes all labor, materials, and equipment necessary to provide a water handling/treatment system to collect, treat, and discharge water collected as a result of remediation activities. The water treatment system is preliminarily assumed to consist of a sand and carbon filter system. Water treatment system details will be refined during the project design phase. Water treatment quantities were calculated assuming an average water depth of 1.75' would be treated over the entire tributary area and utilizing a 240 gallons per CY volumetric relationship.
6. Material will be excavated using either mechanical or hydraulic dredging methods to a depth of 6" with an allowable overdredge of 6". It is assumed that the anticipated 6,700 cubic yards of dreded material will be stabilized using approximately 15% (1,000 cy) portland cement. Dredged sediments will be transported to the on-site landfill for disposal.
7. Cell 3 of the existing on-site landfill (i.e., New Brine Sludge Landfill) will be constructed to be utilized for disposal of dredged sediments. Cell 3 will be capped with 24 inches of topsoil/silty/clay/synthetic liner and vegetated upon completion of dredged sediment disposal. Cost includes performing all cell surveys, cell cleaning, dike reshaping/raising, and site closure.
8. Backfill will consist of a 6" clean sand layer with an additional 6" overplacement allowance. It is anticipated that the sand will be placed using mechanical means (i.e., telescoping belt conveyor, backhoe, etc.) at a rate of approximately 300 cy/day. The backfill materials will be transported via truck to the staging area. The costs include transport, purchase, and placement of materials. It is assumed that 20% additional sand will be required to achieve adequate coverage.
9. Construction monitoring/oversight includes daily oversight of construction activities and is assumed to be conducted during all activities. It is envisioned that the construction monitoring/oversight would include water column monitoring, backfill material sampling, and backfill material thickness measurements. Best management practices will be employed to control turbidity during capping activities. Estimate duration includes a 25% reduction in productivity rates due to shallow nature of the work area.
10. Engineering fees typically range between 7 to 15% of remediation costs as recommended by the USEPA in*Remedial Action Costing Procedures Manual*, 600/8-87-049 (USEPA, 1987), and *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, EPA 540-R-00-002 (USEPA, 2000). For the purposes of this estimate, a value of 15% has been used.
11. A contingency allowance has been included to account for unforeseen circumstances or variability in the material types, volumes, labor, and/or material costs. The contingency typically ranges from 15 to 25% of the remediation costs as recommended by the USEPA (USEPA, 1987, and USEPA, 2000). For the purposes of this estimate, a value of 30% has been used.

Source: CRA Inc. (Project No. 007462-99912 Draft CMS Report 47; Section 4.26 AOC 8; August 2008; Anchor Environmental, L.L.C.)

PRESENT WORTH ANALYSIS
AOC 8 - ALTERNATIVE 4
REACTIVE CAPPING (EAST TRIB) & DREDGING AND BACKFILLING (WEST TRIB)
GSHI, DELAWARE CITY FACILITY

ITEM NO.	DESCRIPTION	UNIT	NO. OF UNITS	ESTIMATED UNIT COST (2008$)	ESTIMATED COST (2008$)
1	Pre-Design Investigation	LS	1	$375,000	$375,000
2	Mobilization/Demobilization	LS	1	$220,600	$221,000
3	Staging Area Development/Restoration	LS	1	$150,000	$150,000
4	Dewatering/Water Diversion	LS	1	$300,000	$300,000
5	Water Treatment	LS	657,000	$0.15	$99,000
6	Reactive Cap: Organoclay Matting (Eastern Trib.)	SF	152,000	$4	$608,000
7	Clean Sand Cap (Eastern Trib.)	CY	2,600	$36	$95,000
8	Dredging (Western Trib.) & Material Transport to Cell 3	CY	1,800	$75	$135,000
9	Cell 3 Construction and Closure	LS	1	$750,000	$750,000
10	Backfilling (Western Trib.)	CY	1,900	$36	$69,000
11	Construction Monitoring/ Oversight	LS	3	$100,000	$300,000
				Construction Total:	$3,102,000
				12. Engineering Design (15%):	$465,000
				13. Contingency (30%):	$931,000
				14. Long-Term Operating, Monitoring, and Maintenance (OM&M) Program (Present Worth):	$105,000
				Total (2008 $):	$4,603,000
				Rounded Total (2008 $):	$4,600,000

ALTERNATIVE 4 - REACTIVE CAPPING (EAST TRIB) & DREDGING AND BACKFILLING (WEST TRIB)

· This alternative includes placement of an sand/organoclay reactive cap over the entire Eastern Tributary Area (3.17 acres). The Western Tributary Area (0.97 acres) will be dredged to depth of 6" (with an additional 6" overdredge tolerance) and a 6" clean sand backfill layer (with an additional 6" overplacement allowance) will be placed over all dredged areas.

Notes and Assumptions:

1. Additional investigative studies will be performed prior to implementation of this alternative to obtain site-specific information (e.g., bathymetric surveys, geotechnical sampling, water column testing, geochemical analysis, habitat surveys and cap design studies).
2. Includes mobilization and demobilization of labor, equipment, and materials necessary to implement the alternative as described above. The mobilization/demobilization cost has been estimated at 10% of the total construction cost. It is estimated that work can be completed in three months. It is assumed that work will be conducted 12 hours per day, 5 days per week.
3. Staging area development/restoration includes clearing, grubbing, and preparation of the area for use during construction activities. It is assumed that land located adjacent to the tributary will be used for stockpiling cap materials. Restoration will include removal and disposal of gravel and fill where necessary, followed by topsoil and vegetation as appropriate.
4. Dewatering and water diversion will include diverting water from the tributary and using sumps/pumps to keep the area dewatered 24 hours per day, 7 days per week.
5. Water treatment includes all labor, materials, and equipment necessary to provide a water handling/treatment system to collect, treat, and discharge water collected as a result of remediation activities. The water treatment system is preliminarily assumed to consist of a sand and carbon filter system. Water treatment system details will be refined during the project design phase. Water treatment quantities were calculated assuming an average water depth of 1.75' would be treated over the entire tributary area and utilizing a 240 gallons per CY volumetric relationship.
6. The reactive cap will consist of a single organoclay mat layer in the eastern tributary. It is anticipated that the mat can be placed at a rate of approximately 10,000 sf/day, and backfill will be placed using mechanical means (i.e., telescoping belt conveyor, backhoe, etc.) at a rate of approximately 300 cy/day. The backfill materials will be transported via truck to the staging area. The cap and backfill costs include transport, purchase, and placement of materials. It is assumed that 10% additional mat will be needed for overlap and 20% additional sand will be required to achieve adequate coverage.
7. A 3" layer of clean sand (with an additional 3" overplacement allowance) will be placed in the eastern tributary on top of the reactive matting to help secure the cap.
8. Material will be excavated using either mechanical or hydraulic dredging methods to a depth of 6" with an allowable overdredge of 6". It is assumed that the anticipated 1,550 cubic yards of dreded material will be stabilized using approximately 15% (250 cy) portland cement. Dredged sediments will be transported to the on-site landfill for disposal.
9. Cell 3 of the existing on-site landfill (i.e., New Brine Sludge Landfill) will be constructed to be utilized for disposal of dredged sediments. Cell 3 will be capped with 24 inches of topsoil/silty/clay/synthetic liner and vegetated upon completion of dredged sediment disposal. Cost includes performing all cell surveys, cell cleaning, dike reshaping/raising, and site closure.
10. Backfill will consist of a 6" clean sand layer with a 6" overplacement allowance. It is anticipated that the sand will be placed using mechanical means (i.e., telescoping belt conveyor, backhoe, etc.) at a rate of approximately 300 cy/day. The backfill materials will be transported via truck to the staging area. The costs include transport, purchase, and placement of materials. It is assumed that 20% additional sand will be required to achieve adequate coverage.
11. Construction monitoring/oversight includes daily oversight of construction activities and is assumed to be conducted during all activities. It is envisioned that the construction monitoring/oversight would include water column monitoring, backfill material sampling, and backfill material thickness measurements. Best management practices will be employed to control turbidity during capping activities. Estimate duration includes a 25% reduction in productivity rates due to shallow nature of the work area.
12. Engineering fees typically range between 7 to 15% of remediation costs as recommended by the USEPA in *Remedial Action Costing Procedures Manual* , 600/8-87-049 (USEPA, 1987), and *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study* , EPA 540-R-00-002 (USEPA, 2000). For the purposes of this estimate, a value of 15% has been used.
13. A contingency allowance has been included to account for unforeseen circumstances or variability in the material types, volumes, labor, and/or material costs. The contingency typically ranges from 15 to 25% of the remediation costs as recommended by the USEPA (USEPA, 1987, and USEPA, 2000). For the purposes of this estimate, a value of 30% has been used.
14. The long-term OM&M program is expected to include monitoring of the capped area to check the integrity of the placed materials. Post-placement cap thickness will be measured after construction. Cap and water column sampling is anticipated for the 1st, 3rd, 5th, and every 5 years thereafter for a duration of 30 years. It is assumed that cap maintenance will be required once every 5 years (estimated at 1% of the total cap construction cost) for a duration of 30 years. The estimated cost for the long-term monitoring program was calculated using the present worth analysis process outlined by the USEPA (USEPA, July 2000) at a discounted rate of 5%.

Source: CRA Inc. (Project No. 007462-99912 Draft CMS Report 47; Section 4.26 AOC 8; August 2008; Anchor Environmental, L.L.C.)

PRESENT WORTH ANALYSIS
AOC 8 - ALTERNATIVE 5
DREDGING AND REACTIVE CAPPING (EAST TRIB) & DREDGING AND BACKFILLING (WEST TRIB)
GSHI, DELAWARE CITY FACILITY

ITEM NO.	DESCRIPTION	UNIT	NO. OF UNITS	ESTIMATED UNIT COST (2008$)	ESTIMATED COST (2008$)
1	Pre-Design Investigation	LS	1	$375,000	$375,000
2	Mobilization/Demobilization	LS	1	$297,000	$297,000
3	Staging Area Development/Restoration	LS	1	$150,000	$150,000
4	Dewatering/Water Diversion	LS	1	$300,000	$300,000
5	Dredging & Material Transport to Cell 3	CY	7,700	$75	$578,000
6	Cell 3 Construction and Closure	LS	1	$750,000	$750,000
7	Water Treatment	GAL	2,806,000	$0.15	$421,000
8	Reactive Cap: Organoclay Matting (Eastern Trib.)	SF	152,000	$4	$608,000
9	Clean Sand Cap (Eastern Trib.)	CY	2,600	$36	$95,000
10	Backfilling (Western Trib.)	CY	1,900	$36	$69,000
11	Construction Monitoring/ Oversight	LS	3	$100,000	$300,000
				Construction Total:	$3,943,000
				12. Engineering Design (15%):	$591,000
				13. Contingency (30%):	$1,183,000
				14. Long-Term Operating, Monitoring, and Maintenance (OM&M) Program (Present Worth):	$105,000
				Total (2008 $):	$5,822,000
				Rounded Total (2008 $):	$5,800,000

ALTERNATIVE 5 - DREDGING AND REACTIVE CAPPING (EAST TRIB) & DREDGING AND BACKFILLING (WEST TRIB)

· This alternative involves dredging the entire tributary area (4.14 acres) to a depth of 6" (with an additional 6" overdredge allowance). A sand/organoclay reactive cap will then be placed in the Eastern Tributary (3.17 acres) and a 6" clean sand backfill layer (with an additional 6" overplacement allowance) will be placed over the entire Western Tributary Area (0.97 acres).

Notes and Assumptions:

1. Additional investigative studies will be performed prior to implementation of this alternative to obtain site-specific information (e.g., bathymetric surveys, geotechnical sampling, water column testing, geochemical analysis, habitat surveys and cap design studies).
2. Includes mobilization and demobilization of labor, equipment, and materials necessary to implement the alternative as described above. The mobilization/demobilization cost has been estimated at 10% of the total construction cost. It is estimated that work can be completed in three months. It is assumed that work will be conducted 12 hours per day, 5 days per week.
3. Staging area development/restoration includes clearing, grubbing, and preparation of the area for use during construction activities. It is assumed that land located adjacent to the tributary will be used for stockpiling cap materials. Restoration will include removal and disposal of gravel and fill where necessary, followed by topsoil and vegetation as appropriate.
4. Dewatering and water diversion will include diverting water from the tributary and using sumps/pumps to keep the area dewatered 24 hours per day, 7 days per week.
5. Material will be excavated using either mechanical or hydraulic dredging methods to a depth of 6" with an allowable overdredge of 6". It is assumed that the anticipated 6,700 cubic yards of dreded material will be stabilized using approximately 15% (1,000 cy) portland cement. Dredged sediments will be transported to the on-site landfill for disposal.
6. Cell 3 of the existing on-site landfill (i.e., New Brine Sludge Landfill) will be constructed to be utilized for disposal of dredged sediments. Cell 3 will be capped with 24 inches of topsoil/silty/clay/synthetic liner and vegetated upon completion of dredged sediment disposal. Cost includes performing all cell surveys, cell cleaning, dike reshaping/raising, and site closure.
7. Water treatment includes all labor, materials, and equipment necessary to provide a water handling/treatment system to collect, treat, and discharge water collected as a result of remediation activities. The water treatment system is preliminarily assumed to consist of a sand and carbon filter system. Water treatment system details will be refined during the project design phase. Water treatment quantities were calculated assuming an average water depth of 1.75' would be treated over the entire tributary area and utilizing a 240 gallons per CY volumetric relationship.
8. The in situ cap will consist of an organoclay reactive mat overlaid by a 3" layer of clean sand (with an additional 3" overplacement allowance) in the eastern tributary. The cap materials will be transported via truck to the staging area. The cap costs include transport purchase, and placement of materials. It is assumed that 10% additional matting will be needed for overlap and 20% additional sand will be required to achieve adequate coverage.
9. A 3" layer of clean sand (with an additional 3" overplacement allowance) will be placed in the eastern tributary on top of the reactive matting to help secure the cap.
10. Backfill will consist of a 6" clean sand layer with a 6" overplacement allowance. It is anticipated that the sand will be placed using mechanical means (i.e., telescoping belt conveyor, backhoe, etc.) at a rate of approximately 300 cy/day. The backfill materials will be transported via truck to the staging area. The costs include transport, purchase, and placement of materials. It is assumed that 20% additional sand will be required to achieve adequate coverage.
11. Construction monitoring/oversight includes daily oversight of construction activities and is assumed to be conducted during all activities. It is envisioned that the construction monitoring/oversight would include water column monitoring, backfill material sampling, and backfill material thickness measurements. Best management practices will be employed to control turbidity during capping activities. Estimate duration includes a 25% reduction in productivity rates due to shallow nature of the work area.
12. Engineering fees typically range between 7 to 15% of remediation costs as recommended by the USEPA in *Remedial Action Costing Procedures Manual*, 600/8-87-049 (USEPA, 1987), and *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, EPA 540-R-00-002 (USEPA, 2000). For the purposes of this estimate, a value of 15% has been used.
13. A contingency allowance has been included to account for unforeseen circumstances or variability in the material types, volumes, labor, and/or material costs. The contingency typically ranges from 15 to 25% of the remediation costs as recommended by the USEPA (USEPA, 1987, and USEPA, 2000). For the purposes of this estimate, a value of 30% has been used.
14. The long-term OM&M program is expected to include monitoring of the capped area to check the integrity of the placed materials. Post-placement cap thickness will be measured after construction. Cap and water column sampling is anticipated for the 1st, 3rd, 5th, and every 5 years thereafter for a duration of 30 years. It is assumed that cap maintenance will be required once every 5 years (estimated at 1% of the total cap construction cost) for a duration of 30 years. The estimated cost for the long-term monitoring program was calculated using the present worth analysis process outlined by the USEPA (USEPA, July 2000) at a discounted rate of 5%.

Source: CRA Inc. (Project No. 007462-99912 Draft CMS Report 47; Section 4.26 AOC 8; August 2008; Anchor Environmental, L.L.C.)